



THE ANSWERS

ADDITION IS EASY
WHEN YOU KNOW HOW
AND YOU KNOW HOW!
M.C. ADDITION



- | | | | | |
|--------|--------|--------|--------|--------|
| 5+2=7 | 8+1=9 | 1+3=4 | 2+6=8 | 2+2=4 |
| 1+2=3 | 0+4=4 | 6+3=9 | 0+5=5 | 4+0=4 |
| 5+5=10 | 4+1=5 | 1+7=8 | 3+2=5 | 9+2=11 |
| 1+6=7 | 1+1=2 | 2+9=11 | 6+6=12 | 2+8=10 |
| 0+2=2 | 8+8=16 | 2+7=9 | 7+2=9 | 4+8=12 |
| 4+2=6 | 7+1=8 | 7+7=14 | 5+6=11 | 0+1=1 |
| 4+6=10 | 3+4=7 | 0+9=9 | 2+0=2 | 3+6=9 |

(DON'T FORGET TO CORRECT YOUR MISTAKES)

- | | | | | |
|---------|---------|---------|----------|----------|
| 11+4=15 | 16+8=24 | 11+9=20 | 19+19=38 | 25+14=39 |
| 14+1=15 | 11+8=19 | 14+7=21 | 10+13=23 | 25+18=43 |
| 13+8=21 | 19+4=23 | 19+3=22 | 14+13=27 | 23+17=40 |
| 13+4=17 | 11+7=18 | 17+9=26 | 13+17=30 | 38+18=56 |
| 12+8=20 | 12+3=15 | 19+7=26 | 18+13=31 | 34+15=49 |
| 16+1=17 | 16+7=23 | 15+3=18 | 17+19=36 | 36+25=61 |
| 17+4=21 | 18+3=21 | 17+6=23 | 15+13=28 | 29+39=68 |

NOW SHADE IN ANY SQUARES WITH WRONG ANSWERS!

DID YOU MAKE AN ERROR?!

LOOK AND SEE!

M.C. ADDITION IS ONE GUY WHO KNOWS THE BENEFIT OF ARITHMETIC!

+	5	8	9	3	2	4	11	6	7	10	5	9
2	7	10	11	5	4	6	13	8	9	12	7	11
4				7	6	8	15	10	11	14	9	13
9	17	18	12		13		15	16	14	14	18	
6	14	15		8		17	12	13	16	11	15	
2		11		4		13	8	9	12	7		
4	12	13		6		15	10	11	14		13	
6	14	15	9	8	10			16		15		
3			6	5	7		9		13	12		
7	12	15	16	10	9	11	13		17	16		
1	6	9	10	4	3	5			11	6	10	

MORE ADDITION - SUM PEOPLE ARE WONDERFUL!

2	8	6	5	2	5
8	8	5	2	6	6
4	1	0	6	6	6
5	2	5	6	5	9
19	19	16	19	19	26
51	48	84	26	50	85
42	52	48	60	25	99
24	88	16	25	66	77
54	64	93	42	83	33
171	252	241	153	224	294

COMPLETE THE TABLES

+	12	20	27	31	36	49
29	41	49	56	60	65	78
14	26	34	41	45	50	63
35	47	55	62	66	71	84

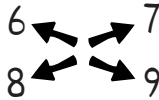
+	52	48	39	32	24	17
27	79	75	66	59	51	44
51	103	99	90	83	75	68
40	92	88	79	72	64	57

SHADE IN THE MISTAKES TO MAKE AN EVERYDAY ITEM!

A CUP



+	48	54	83	27	47	36	65	56	72	45
0			83	47	65					
6		60	89	53	71				78	
5		54	88	52	70					
1			84		66				73	46
2	50	56								47
8	56	62					64			53
9	57	63								54
4	52	58						60	76	49



CALCULATOR ADDITION

-CLAUDIA CALCULATOR WILL HELP YOU WITH THIS PAGE!



THE FIRST SUMS!

246	380	907	591	816
+217	+106	+157	+288	+346
463	486	1064	879	1162
4123	6328	2479	8060	7589
+2915	+4980	+756	+987	+4297
7038	11308	3235	9047	11886

COMPLETE THESE TABLES

+	119	124	232	273	317
148	267	274	380	421	465
672	791	798	904	945	989

+	101	143	211	215	216
419	520	562	630	634	635
564	665	707	775	779	780

MORE SUMS TO SOLVE!

3456	1673	3124	1543	2165
4651	5836	7519	3110	1972
+1948	+4883	+2196	+5490	+2788
10055	12392	12839	10143	6925

SPEED TEST

SEE IF YOU CAN GET ALL THESE CORRECT IN 10 MINUTES!

5	70	75	16	392	695
8	58	99	55	973	128
2	46	98	76	+846	+834
+5	+24	+85	+90	2211	1657
20	198	357	237		
893	597	8683	685	340	237
565	288	4187	196	195	185
1458	885	12870	881	708	714
				1243	1136

MY SCORE IS _____
CORRECT ANY MISTAKES

D.J. ELAINE EQUAL'S
SIMPLY SENSATIONAL SUBTRACTION!



36-14=22	96-44=52	38-16=22	39-26=13
29-16=13	86-32=54	72-40=32	75-63=12
38-17=21	79-56=23	87-35=52	99-38=61
47-23=24	93-40=53	46-15=31	74-30=44
84-34=50	88-35=53	65-32=33	94-62=32
59-35=24	79-24=55	84-71=13	79-27=52
488	529	650	789
-236	-307	-420	-573
252	222	230	216
594	978	672	536
-562	-547	-341	-224
32	431	331	312

REPLACE EACH ANSWER WITH ITS LETTER IN THE CODED MESSAGE!

A 896	I 796	H 996	T 798	S 469
-222	-284	-84	-476	-154
674	512	912	322	315
R 465	V 797	P 867	E 398	L 556
-333	-402	-253	-157	-341
132	395	614	241	215
G 887	N 326	O 799		
-350	-105	-408		
537	221	391		

D.J. ELAINE EQUAL'S: "DOCTOR, I THINK I HAVE INSOMNIA"
DOCTOR: "THAT'S NOTHING"
322 912 614 322 315 221 391 322 912 512 221 537
T O L O S E S L E E P O V E R!
322 371 215 391 315 241 315 215 241 241 614 391 395 241 132

- FRESH SUBTRACTION FROM ELAINE!

TAKEAWAYS TASTE BEST!

$\begin{array}{r} 43 \\ -27 \\ \hline 16 \end{array}$	$\begin{array}{r} 33 \\ -18 \\ \hline 15 \end{array}$	$\begin{array}{r} 62 \\ -46 \\ \hline 16 \end{array}$	$\begin{array}{r} 84 \\ -37 \\ \hline 47 \end{array}$	$\begin{array}{r} 92 \\ -27 \\ \hline 65 \end{array}$	$\begin{array}{r} 83 \\ -56 \\ \hline 27 \end{array}$
$\begin{array}{r} 82 \\ -58 \\ \hline 24 \end{array}$	$\begin{array}{r} 74 \\ -39 \\ \hline 35 \end{array}$	$\begin{array}{r} 62 \\ -37 \\ \hline 25 \end{array}$	$\begin{array}{r} 57 \\ -49 \\ \hline 8 \end{array}$	$\begin{array}{r} 38 \\ -19 \\ \hline 19 \end{array}$	$\begin{array}{r} 40 \\ -22 \\ \hline 18 \end{array}$
$\begin{array}{r} 32 \\ -14 \\ \hline 18 \end{array}$	$\begin{array}{r} 76 \\ -38 \\ \hline 38 \end{array}$	$\begin{array}{r} 92 \\ -39 \\ \hline 53 \end{array}$	$\begin{array}{r} 70 \\ -26 \\ \hline 44 \end{array}$	$\begin{array}{r} 84 \\ -29 \\ \hline 55 \end{array}$	$\begin{array}{r} 57 \\ -48 \\ \hline 9 \end{array}$
$\begin{array}{r} 74 \\ -38 \\ \hline 36 \end{array}$	$\begin{array}{r} 72 \\ -25 \\ \hline 47 \end{array}$	$\begin{array}{r} 81 \\ -65 \\ \hline 16 \end{array}$	$\begin{array}{r} 38 \\ -9 \\ \hline 29 \end{array}$	$\begin{array}{r} 70 \\ -44 \\ \hline 26 \end{array}$	$\begin{array}{r} 81 \\ -27 \\ \hline 54 \end{array}$

- NOW TRY THIS PUZZLE!

"WHAT DID ONE TAILPIPE SAY TO THE OTHER?"



R $\begin{array}{r} 34 \\ -16 \\ \hline 18 \end{array}$	I $\begin{array}{r} 82 \\ -27 \\ \hline 55 \end{array}$	S $\begin{array}{r} 47 \\ -39 \\ \hline 8 \end{array}$	L $\begin{array}{r} 88 \\ -29 \\ \hline 59 \end{array}$	Y $\begin{array}{r} 72 \\ -25 \\ \hline 47 \end{array}$
H $\begin{array}{r} 55 \\ -48 \\ \hline 7 \end{array}$	U $\begin{array}{r} 70 \\ -47 \\ \hline 23 \end{array}$	E $\begin{array}{r} 81 \\ -14 \\ \hline 67 \end{array}$	M $\begin{array}{r} 37 \\ -9 \\ \hline 28 \end{array}$	O $\begin{array}{r} 45 \\ -18 \\ \hline 27 \end{array}$
P $\begin{array}{r} 95 \\ -76 \\ \hline 19 \end{array}$	B $\begin{array}{r} 66 \\ -29 \\ \hline 37 \end{array}$	T $\begin{array}{r} 74 \\ -9 \\ \hline 65 \end{array}$	X $\begin{array}{r} 67 \\ -28 \\ \hline 39 \end{array}$	A $\begin{array}{r} 80 \\ -8 \\ \hline 72 \end{array}$

M.C. ADDITION

"BOY I AM REALLY EXHAUSTED!"

$\begin{array}{r} 37 \\ 27 \\ 47 \end{array}$	$\begin{array}{r} 55 \\ 72 \\ 28 \end{array}$	$\begin{array}{r} 18 \\ 67 \\ 72 \\ 59 \\ 59 \\ 47 \end{array}$
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CALCULATOR SUBTRACTION

USE MISS CLAUDIA CALCULATOR TO HELP YOU SOLVE THE PROBLEMS BELOW!



START SUBTRACTING!

$\begin{array}{r} 356 \\ -267 \\ \hline 89 \end{array}$	$\begin{array}{r} 480 \\ -195 \\ \hline 285 \end{array}$	$\begin{array}{r} 917 \\ -357 \\ \hline 560 \end{array}$	$\begin{array}{r} 592 \\ -198 \\ \hline 394 \end{array}$	$\begin{array}{r} 8463 \\ -3582 \\ \hline 4881 \end{array}$
$\begin{array}{r} 4123 \\ -2035 \\ \hline 2088 \end{array}$	$\begin{array}{r} 6238 \\ -3159 \\ \hline 3079 \end{array}$	$\begin{array}{r} 5305 \\ -4276 \\ \hline 1029 \end{array}$	$\begin{array}{r} 3918 \\ -1838 \\ \hline 2080 \end{array}$	$\begin{array}{r} 2345 \\ -587 \\ \hline 1758 \end{array}$
$\begin{array}{r} 10000 \\ -4567 \\ \hline 5433 \end{array}$	$\begin{array}{r} 20000 \\ -8765 \\ \hline 11235 \end{array}$	$\begin{array}{r} 10000 \\ -9312 \\ \hline 688 \end{array}$	$\begin{array}{r} 20000 \\ -11843 \\ \hline 8157 \end{array}$	$\begin{array}{r} 2000 \\ -1635 \\ \hline 365 \end{array}$
$\begin{array}{r} 12345 \\ -1234 \\ \hline 11111 \end{array}$	$\begin{array}{r} 24321 \\ -4235 \\ \hline 20086 \end{array}$	$\begin{array}{r} 43860 \\ -10872 \\ \hline 32988 \end{array}$	$\begin{array}{r} 101010 \\ -100101 \\ \hline 90909 \end{array}$	

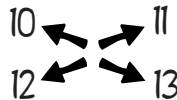
SPEED TEST

SEE IF YOU CAN GET ALL THESE CORRECT IN 10 MINUTES!

$\begin{array}{r} 86 \\ -68 \\ \hline 18 \end{array}$	$\begin{array}{r} 401 \\ -107 \\ \hline 294 \end{array}$	$\begin{array}{r} 685 \\ -219 \\ \hline 466 \end{array}$	$\begin{array}{r} 52 \\ -25 \\ \hline 27 \end{array}$	$\begin{array}{r} 594 \\ -387 \\ \hline 207 \end{array}$
$\begin{array}{r} 893 \\ -656 \\ \hline 237 \end{array}$	$\begin{array}{r} 6832 \\ -769 \\ \hline 6063 \end{array}$	$\begin{array}{r} 5476 \\ -2388 \\ \hline 3088 \end{array}$	$\begin{array}{r} 2469 \\ -875 \\ \hline 1594 \end{array}$	$\begin{array}{r} 4616 \\ -3727 \\ \hline 889 \end{array}$

$2547 - 365 = 2182$ $9015 - 876 = 8139$

MY SCORE IS 100
CORRECT ANY MISTAKES!



- P.S. ELAINE EQUAL'S

"NOVEL-NOODLUM"



$7+8=15$ $5+9=14$ $12+6=18$ $14+7=21$
 $11+18=29$ $17+19=33$ $17+16=33$ $20+17=37$

$\begin{array}{r} 6 \\ 5 \\ 5 \\ 6 \\ \hline 22 \end{array}$	$\begin{array}{r} 6 \\ 0 \\ 2 \\ 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 9 \\ 7 \\ 6 \\ 4 \\ \hline 26 \end{array}$	$\begin{array}{r} 10 \\ 11 \\ 12 \\ 13 \\ \hline 46 \end{array}$	$\begin{array}{r} 20 \\ 21 \\ 22 \\ 23 \\ \hline 86 \end{array}$	$\begin{array}{r} 66 \\ 60 \\ 52 \\ 28 \\ \hline 206 \end{array}$	$\begin{array}{r} 79 \\ 58 \\ 99 \\ 88 \\ \hline 324 \end{array}$
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$\begin{array}{r} 127 \\ +193 \\ \hline 320 \end{array}$	$\begin{array}{r} 440 \\ +295 \\ \hline 735 \end{array}$	$\begin{array}{r} 307 \\ +199 \\ \hline 506 \end{array}$	$\begin{array}{r} 4306 \\ +2541 \\ \hline 6847 \end{array}$	$\begin{array}{r} 7885 \\ +2036 \\ \hline 9921 \end{array}$
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$\begin{array}{r} 26 \\ -15 \\ \hline 11 \end{array}$	$\begin{array}{r} 43 \\ -21 \\ \hline 22 \end{array}$	$\begin{array}{r} 61 \\ -41 \\ \hline 20 \end{array}$	$\begin{array}{r} 35 \\ -16 \\ \hline 19 \end{array}$	$\begin{array}{r} 54 \\ -28 \\ \hline 26 \end{array}$	$\begin{array}{r} 75 \\ -44 \\ \hline 31 \end{array}$
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$\begin{array}{r} 828 \\ -516 \\ \hline 312 \end{array}$	$\begin{array}{r} 689 \\ -357 \\ \hline 332 \end{array}$	$\begin{array}{r} 53 \\ -29 \\ \hline 24 \end{array}$	$\begin{array}{r} 740 \\ -180 \\ \hline 560 \end{array}$	$\begin{array}{r} 555 \\ -372 \\ \hline 183 \end{array}$
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$\begin{array}{r} 846 \\ -358 \\ \hline 488 \end{array}$	$\begin{array}{r} 927 \\ -539 \\ \hline 388 \end{array}$	$\begin{array}{r} 450 \\ -186 \\ \hline 264 \end{array}$	$\begin{array}{r} 321 \\ -195 \\ \hline 126 \end{array}$	$\begin{array}{r} 4396 \\ -1859 \\ \hline 2537 \end{array}$
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WHERE DO BABY APES SLEEP?

$\begin{array}{r} 45 \\ +38 \\ \hline T \end{array}$	$\begin{array}{r} 36 \\ +18 \\ \hline C \end{array}$	$\begin{array}{r} 67 \\ +17 \\ \hline R \end{array}$	$\begin{array}{r} 39 \\ +52 \\ \hline A \end{array}$	$\begin{array}{r} 38 \\ -12 \\ \hline I \end{array}$	$\begin{array}{r} 179 \\ -111 \\ \hline O \end{array}$	$\begin{array}{r} 76 \\ -19 \\ \hline P \end{array}$	$\begin{array}{r} 963 \\ -888 \\ \hline N \end{array}$	$\begin{array}{r} 21 \\ +34 \\ \hline S \end{array}$	
$\begin{array}{r} I \\ 26 \end{array}$	$\begin{array}{r} N \\ 77 \end{array}$	$\begin{array}{r} A \\ 91 \end{array}$	$\begin{array}{r} P \\ 77 \end{array}$	$\begin{array}{r} R \\ 84 \end{array}$	$\begin{array}{r} I \\ 26 \end{array}$	$\begin{array}{r} C \\ 54 \end{array}$	$\begin{array}{r} O \\ 28 \end{array}$	$\begin{array}{r} T \\ 83 \end{array}$	$\begin{array}{r} S \\ 89 \end{array}$

MAXWELL THE MIGHTY MULTIPLYING MOUSE RECKONS... "MULTIPLICATION IS THE KEY TO SUCCESS!"

... AND HE'S RIGHT!



START BY SOLVING THESE PROBLEMS.

$3 \times 4 = 12$	$6 \times 7 = 42$	$4 \times 9 = 36$	$8 \times 8 = 64$
$2 \times 8 = 16$	$8 \times 9 = 72$	$7 \times 5 = 35$	$6 \times 9 = 54$
$5 \times 6 = 30$	$9 \times 2 = 18$	$4 \times 4 = 16$	$1 \times 4 = 4$
$4 \times 6 = 24$	$1 \times 1 = 1$	$6 \times 6 = 36$	$3 \times 2 = 6$
$5 \times 5 = 25$	$2 \times 2 = 4$	$4 \times 0 = 0$	$3 \times 3 = 9$
$9 \times 1 = 9$	$3 \times 8 = 24$	$6 \times 1 = 6$	$9 \times 9 = 81$
$3 \times 9 = 27$	$5 \times 1 = 5$	$4 \times 8 = 32$	$6 \times 5 = 30$
$4 \times 7 = 28$	$7 \times 2 = 14$	$7 \times 9 = 63$	$0 \times 3 = 0$

NOW COMPLETE THE MULTIPLE TABLES!

$\times 8$	8	16	24	32	40	48	56	64	72	80	88
$\times 10$	10	20	30	40	50	60	70	80	90	100	110
$\times 11$	11	22	33	44	55	66	77	88	99	110	121

SHADE IN ALL THE MISTAKES!

WHAT DO YOU GET?

MULTIPLICATION IS THE KEY TO SUCCESS



... AND NOW MAX IS OFF TO EXHIBIT SOME OF HIS EXCITING PRODUCTS!

X	4	6	2	9	5	8	1	7	0	3
2		12		18			2		0	
6		36		54		48	6		0	
8			16	72			8			
4		24		36		32	4	28		12
1		6		9			1	7		3
3	12	18	6	27	15	24	3	21	0	9
0				0	0	0	0	0	0	0
5				30						
7					63	56		49		
9	36	54	18	81	45	72		63		

YES, MAXWELL JUST GETS SO EXCITED AT THE PROSPECT OF MORE MULTIPLYING!!

MAXWELL THE MIGHTY MULTIPLYING MOUSE, MOVES MAJESTICALLY TO HIS ADDITION'S MULTIPLYING MELODIES!



$10 \times 10 = 100$ $10 \times 10 \times 10 = 1000$ $100 \times 10 = 1000$
 $10 \times 100 = 1000$ $10 \times 10 \times 10 \times 10 = 10000$ $10 \times 1000 = 10000$
 $100 \times 100 = 10,000$ $1000 \times 100 = 100,000$ $1000 \times 1000 = 1,000,000$

PRODUCT	THINK	ANSWER
70×40	$(7 \times 4) \times (10 \times 10)$	2800
60×80	$(6 \times 8) \times (10 \times 10)$	4800
80×90	$(8 \times 9) \times (10 \times 10)$	7200

— NOW USE THE METHOD ABOVE TO FIND THE ANSWERS BELOW!

60×70	$(67) (1010) = 4200$	90×30	$(93) (1010) = 2800$
20×80	$(28) (1010) = 1600$	70×80	$(78) (1010) = 5600$
50×90	$(59) (1010) = 4500$	20×90	$(29) (1010) = 1800$
80×30	$(83) (1010) = 2400$	60×30	$(63) (1010) = 1800$
40×60	$(46) (1010) = 2400$	50×60	$(56) (1010) = 3000$
30×50	$(35) (1010) = 1500$	70×20	$(72) (1010) = 1400$
60×60	$(66) (1010) = 3600$	40×40	$(44) (1010) = 1600$

PRODUCT	THINK	ANSWER
20×600	$(2 \times 6) \times (10 \times 100)$	12,000
30×400	$(3 \times 4) \times (10 \times 100)$	12,000
50×8000	$(5 \times 8) \times (10 \times 1000)$	400,000

WRITE ANSWERS ONLY FOR THE PROBLEMS BELOW

$30 \times 500 = 15,000$	$70 \times 800 = 56,000$	$50 \times 8000 = 400,000$
$70 \times 300 = 21,000$	$80 \times 500 = 40,000$	$90 \times 4000 = 360,000$
$80 \times 900 = 72,000$	$40 \times 600 = 24,000$	$400 \times 400 = 160,000$
$70 \times 400 = 28,000$	$80 \times 300 = 24,000$	$700 \times 600 = 420,000$
$30 \times 700 = 21,000$	$50 \times 800 = 40,000$	$600 \times 4000 = 2,400,000$
$40 \times 200 = 8,000$	$500 \times 200 = 100,000$	$900 \times 9000 = 8,100,000$
$90 \times 200 = 18,000$	$700 \times 900 = 630,000$	

MORE MULTIPLICATION - MAKE A TOP PRODUCT!

— START WITH THESE PROBLEMS!

$26 \times 3 = 78$	$51 \times 5 = 255$	$32 \times 7 = 224$	$93 \times 2 = 186$	$54 \times 6 = 324$	$65 \times 4 = 260$
$212 \times 3 = 636$	$190 \times 5 = 950$	$345 \times 7 = 2415$	$411 \times 2 = 822$	$173 \times 4 = 692$	$241 \times 8 = 1928$

— COMPLETE THE MULTIPLE STICKS

$\times 20$	20	40	60	80	100	120	140	160	180	200	220	240
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$\times 16$	16	32	48	64	80	96	112	128	144	160	176	192
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$\times 12$	12	24	36	48	60	72	84	96	108	120	132	144
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— NOW SOLVE THESE PROBLEMS!

$25 \times 12 = 300$	$43 \times 13 = 559$	$39 \times 13 = 507$	$23 \times 14 = 322$	$55 \times 14 = 770$	$42 \times 15 = 630$
$136 \times 10 = 1360$	$785 \times 12 = 9420$	$249 \times 11 = 2739$	$412 \times 9 = 3708$	$587 \times 12 = 7044$	$350 \times 9 = 3150$

— SHADE IN ALL THE SQUARES WITH WRONG ANSWERS!

"MULTIPLICATION - A SIGN OF THE TIMES (S)"

X	5	8	9	3	2	4	11	6	7	10	5	9
2	10	16	18	6	4	8	22	12	14	20	10	18
4	20	32	36	12	8	16	44	54	28	40	20	36
9	45	72	81	27	18	36	54	63	90	45	81	54
6	30	48	54	18	12	24	66	36	42	60	30	54
2	10	16	18	6	4	8	22	12	14	20	10	18
4	20	32	36	12	8	16	44	24	28	40	20	36
6	30	48	54	18	12	24	66	36	42	60	30	54
3	15	24	27	9	6	12	33	18	21	30	15	27
7	35	56	63	21	14	28	77	42	49	70	35	63
1	5	8	9	3	2	4	11	6	7	10	5	9

14 ← → 15
16 ← → 17

MAXWELL'S MULTIPLICATION MANIA!

— COMPLETE THE TABLES AND WORK OUT THE ANSWERS TO THE PROBLEMS!



X	7	8	3	0	4	9
8	56	64	24	0	32	72
3	21	24	9	0	12	27
6	42	48	18	0	24	54
2	14	16	6	0	8	18

$(3 \times 7) + 1 = 22$	$(7 \times 6) + 5 = 47$
$(6 \times 2) + 0 = 12$	$(2 \times 9) + 0 = 18$
$(3 \times 9) + 0 = 27$	$(5 \times 5) + 4 = 29$
$(8 \times 8) + 5 = 69$	$(7 \times 8) + 4 = 60$

$(2 \times 2) + 1 = 5$	$(9 \times 2) + 7 = 25$
$(5 \times 8) + 3 = 43$	$(9 \times 5) + 5 = 50$
$(7 \times 3) + 3 = 24$	$(9 \times 0) + 8 = 8$
$(5 \times 6) + 4 = 34$	$(3 \times 8) + 0 = 24$

X	3	9	5	7	6	4
2	6	18	10	14	12	8
5	15	45	25	35	30	20
7	21	63	35	49	42	28
1	3	9	5	7	6	4
9	27	81	45	63	54	36

X	0	6	7	9	3	8
4	0	24	28	36	12	32
11	0	66	77	99	33	88
6	0	36	42	54	18	48
12	0	72	84	108	36	96

$(4 \times 3) + 3 = 15$	$(8 \times 6) + 7 = 55$
$(4 \times 0) + 0 = 0$	$(8 \times 2) + 6 = 22$
$(4 \times 9) + 3 = 39$	$(6 \times 4) + 4 = 28$
$(9 \times 0) + 8 = 8$	$(3 \times 6) + 0 = 18$

NOW USE YOUR MULTIPLICATION KNOWLEDGE TO FILL IN THE GAPS BELOW!

$5 \times 8 = 4 \times 10$
$42 \times 1 = 7 \times 6$
$8 \times 8 = 1 \times 64$
$5 \times 14 = 35 \times 2$
$12 \times 10 = 40 \times 3$
$6 \times 4 = 3 \times 8$
$2 \times 12 = 4 \times 6$

$5 \times 6 = 10 \times 3$
$7 \times 5 = 5 \times 7$
$9 \times 8 = 12 \times 6$
$6 \times 6 = 4 \times 9$
$6 \times 3 = 9 \times 2$
$10 \times 8 = 4 \times 20$
$7 \times 15 = 35 \times 3$

ALL THIS MULTIPLYING LEAVES MAXWELL A LITTLE EXHAUSTED!

'DIANNE, DO YOU DEFINITELY FIND DIVISION EASY?'

"YES!"

DIVINE DIANNE THE DIVIDING DOORHOUSE



$15 \div 3 = 5$	$36 \div 9 = 4$	$60 \div 6 = 10$	$24 \div 3 = 8$
$20 \div 4 = 5$	$5 \div 1 = 5$	$56 \div 7 = 8$	$32 \div 4 = 8$
$30 \div 5 = 6$	$10 \div 10 = 1$	$26 \div 2 = 13$	$15 \div 5 = 3$
$16 \div 8 = 2$	$36 \div 3 = 12$	$63 \div 9 = 7$	$40 \div 8 = 5$
$18 \div 6 = 3$	$44 \div 4 = 11$	$8 \div 1 = 8$	$36 \div 6 = 6$
$28 \div 7 = 4$	$45 \div 5 = 9$	$90 \div 10 = 9$	$14 \div 7 = 2$
$14 \div 2 = 7$	$72 \div 8 = 9$	$13 \div 1 = 13$	$50 \div 10 = 5$
$40 \div 2 = 20$	$27 \div 9 = 3$		

(REMEMBER TO CORRECT ANY MISTAKES!)

$8 \overline{)160}$	$8 \overline{)48}$	$6 \overline{)42}$	$5 \overline{)25}$	$6 \overline{)54}$
$4 \overline{)16}$	$9 \overline{)90}$	$10 \overline{)60}$	$7 \overline{)49}$	$20 \overline{)100}$
$9 \overline{)72}$	$6 \overline{)24}$	$4 \overline{)28}$	$8 \overline{)56}$	$10 \overline{)40}$
$6 \overline{)42}$	$9 \overline{)45}$	$2 \overline{)22}$	$3 \overline{)27}$	$9 \overline{)81}$

HOW CAN WE MAKE DIVISION EASY? DO THESE SUMS TO DECODE DIANNE'S HELPFUL HINT!

T $\frac{20}{5} = 4$	O $\frac{66}{6} = 11$	K $\frac{200}{10} = 20$	Y $\frac{90}{3} = 30$	S $\frac{16}{12} = 1\frac{2}{3}$
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V $\frac{24}{4} = 6$	M $\frac{63}{7} = 9$	I $\frac{18}{9} = 2$	R $\frac{60}{1} = 60$	W $\frac{12}{11} = 1\frac{1}{11}$
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N $\frac{30}{3} = 10$	L $\frac{24}{8} = 3$	P $\frac{100}{2} = 50$	E $\frac{91}{7} = 13$	A $\frac{40}{12} = 3\frac{1}{3}$
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"PLEASE MY LITTLE PAL
50 3 13 40 16 13 9 30 3 2 4 4 3 13 50 40 3
KNOW YOUR MULTIPLES!"
20 10 11 12 30 11 6 60 9 6 3 4 2 50 3 13 16

MORE DIVISION WITH...

...DIVINE DIANNETTE DIVIDING DOORMOUSE!
(MAX'S CRAZY COUSIN!)



$8 \overline{)1088}$	$7 \overline{)1505}$	$6 \overline{)1944}$	$4 \overline{)3024}$
$5 \overline{)840}$	$6 \overline{)1548}$	$8 \overline{)1880}$	$7 \overline{)1358}$
$6 \overline{)3294}$	$8 \overline{)3408}$	$7 \overline{)3255}$	$5 \overline{)3285}$
$7 \overline{)5691}$	$5 \overline{)4245}$	$6 \overline{)5706}$	$8 \overline{)4344}$

136	215	324	432
168	258	235	194
549	426	465	657
813	849	951	543

- COMPLETE THE DIVIDING SQUARES

$\begin{array}{ c c c } \hline 48 & 6 & 8 \\ \hline 8 & 2 & 4 \\ \hline 6 & 3 & 2 \\ \hline \end{array}$	$\begin{array}{ c c c } \hline 42 & 6 & 7 \\ \hline 14 & 2 & 7 \\ \hline 3 & 3 & 1 \\ \hline \end{array}$	$\begin{array}{ c c c } \hline 200 & 10 & 20 \\ \hline 20 & 5 & 4 \\ \hline 10 & 2 & 5 \\ \hline \end{array}$
--	---	---

$2 \overline{)684}$	$3 \overline{)8520}$	$4 \overline{)7531}$	$5 \overline{)6242}$
$4 \overline{)1231}$	$3 \overline{)25560}$	$4 \overline{)30124}$	$5 \overline{)31210}$
$7 \overline{)371079}$	$10 \overline{)789520}$	$11 \overline{)283910}$	$12 \overline{)190872}$

- SOME TURTLE POWER PUZZLES!

HOW DO YOU RECOGNISE RICH TURTLES?
"THEY WEAR NECK SWEATERS!"

- | | |
|-------------------------------|---------------------|
| $28 \ 39 \ 32 \ 92$ | $34 \ 32 \ 45 \ 49$ |
| $27 \ 32 \ 23 \ 27 \ 36 \ 32$ | $37 \ 32 \ 35 \ 44$ |
- WHAT IS GREEN & USES 'SHELL' TO GO 100 km/h?
"A TURTLE IN A SPORTS CAR"
- | | | | |
|------------------------------------|----------------|-------------------------------|----------------|
| $45 \ 28 \ 43 \ 49 \ 28 \ 36 \ 32$ | $31 \ 37 \ 45$ | $25 \ 27 \ 23 \ 49 \ 28 \ 25$ | $35 \ 45 \ 44$ |
|------------------------------------|----------------|-------------------------------|----------------|
- | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Y $336 \div 8 = 42$ | K $220 \div 5 = 44$ | R $196 \div 4 = 49$ | V $258 \div 6 = 43$ |
| N $222 \div 6 = 37$ | I $124 \div 4 = 31$ | L $180 \div 5 = 36$ | E $280 \div 8 = 35$ |
| W $306 \div 9 = 34$ | H $273 \div 7 = 39$ | O $207 \div 9 = 23$ | P $189 \div 7 = 27$ |
| A $540 \div 12 = 45$ | T $336 \div 12 = 28$ | S $275 \div 11 = 25$ | E $352 \div 11 = 32$ |

CALCULATOR DIVISION

ANOTHER JOB FOR...
...MISS CLAUDIA CALCULATOR!!



$3780 \div 21 = 180$ $6840 \div 19 = 360$
 $8544 \div 16 = 534$ $8150 \div 25 = 326$
 $12684 \div 28 = 453$ $14637 \div 17 = 861$

- COMPLETE THESE MULTIPLE BOXES

$18 \times 543 = 9774$ $18 \times 345 = 6210$ $18 \times 262 = 4716$
 $23 \times 456 = 10488$ $23 \times 654 = 15042$ $23 \times 191 = 4393$

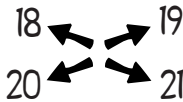
- NOW DO THESE DIVISION SUMS!

$18 \overline{)9774}$	$18 \overline{)6210}$	$18 \overline{)4716}$
$23 \overline{)10488}$	$23 \overline{)15042}$	$23 \overline{)4393}$
$34 \overline{)87414}$	$34 \overline{)96084}$	$34 \overline{)99756}$
$20 \overline{)654300}$	$30 \overline{)945600}$	$40 \overline{)340840}$

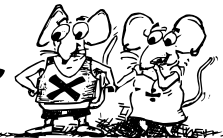
- THE FINAL TEN HAVE A DECIMAL REMAINDER. READ THE FIRST DECIMAL PLACE AND WRITE THE LETTER ABOVE THE NUMBER IN THE PUZZLE!

- | | | |
|--------------------------------|--------------------------------|--------------------------------|
| C $352 \div 14 = 25.1$ | E $1571 \div 26 = 60.4$ | O $941 \div 19 = 49.5$ |
| A $700 \div 16 = 43.7$ | N $489 \div 15 = 32.6$ | M $1448 \div 24 = 60.3$ |
| X $811 \div 18 = 45.0$ | R $650 \div 17 = 38.2$ | T $1615 \div 27 = 59.8$ |
| S $1216 \div 21 = 57.9$ | | |

"MOST I ÷ IREAT ONE EASY
3 5 9 8 8 2 4 7 8 5 6 4 4 7 9
SOME ARE MEAN, NOT EXACT!
9 5 3 4 7 2 4 3 4 7 6 6 5 8 4 0 7 1 8



MAX & DI TEAM UP TO BRING YOU MORE OF THEIR... MERITORIOUS MATHS!



$3 \times 8 = 24$ $9 \times 2 = 18$ $5 \times 3 = 15$ $7 \times 6 = 42$
 $4 \times 4 = 16$ $5 \times 5 = 25$ $7 \times 7 = 49$ $9 \times 9 = 81$

$\begin{array}{r} 14 \\ \times 4 \\ \hline 56 \end{array}$	$\begin{array}{r} 15 \\ \times 5 \\ \hline 75 \end{array}$	$\begin{array}{r} 16 \\ \times 6 \\ \hline 96 \end{array}$	$\begin{array}{r} 17 \\ \times 7 \\ \hline 119 \end{array}$	$\begin{array}{r} 18 \\ \times 8 \\ \hline 144 \end{array}$	$\begin{array}{r} 19 \\ \times 9 \\ \hline 171 \end{array}$
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$\begin{array}{r} 37 \\ \times 9 \\ \hline 333 \end{array}$	$\begin{array}{r} 124 \\ \times 3 \\ \hline 372 \end{array}$	$\begin{array}{r} 235 \\ \times 2 \\ \hline 470 \end{array}$	$\begin{array}{r} 346 \\ \times 2 \\ \hline 692 \end{array}$	$\begin{array}{r} 132 \\ \times 3 \\ \hline 396 \end{array}$	$\begin{array}{r} 240 \\ \times 9 \\ \hline 2160 \end{array}$
---	--	--	--	--	---

$70 \div 7 = 10$ $60 \div 3 = 20$ $64 \div 8 = 8$ $42 \div 2 = 21$
 $81 \div 9 = 9$ $45 \div 5 = 9$ $40 \div 4 = 10$ $30 \div 6 = 5$

$12 \overline{)108}$	$12 \overline{)144}$	$12 \overline{)192}$	$12 \overline{)240}$	$12 \overline{)360}$
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$\begin{array}{r} 1284 \\ 2 \overline{)2568} \end{array}$	$\begin{array}{r} 1575 \\ 3 \overline{)4725} \end{array}$	$\begin{array}{r} 16358 \\ 4 \overline{)65432} \end{array}$	$\begin{array}{r} 6295 \\ 5 \overline{)31475} \end{array}$
---	---	---	--

S $\begin{array}{r} 78 \\ \times 10 \\ \hline 780 \end{array}$	O $\begin{array}{r} 39 \\ \times 8 \\ \hline 312 \end{array}$	Y $\begin{array}{r} 27 \\ \times 9 \\ \hline 243 \end{array}$	I $\begin{array}{r} 62 \\ \times 12 \\ \hline 744 \end{array}$	A $\begin{array}{r} 54 \\ \times 7 \\ \hline 378 \end{array}$
---	--	--	---	--

C $\frac{60}{15} = 4$	H $\frac{102}{17} = 6$	T $\frac{100}{20} = 5$	M $\frac{175}{25} = 7$
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"G O M I G H T Y M A T H S!"
 $\begin{array}{r} 4 \ 312 \\ 7 \ 744 \ 4 \ 6 \ 5 \ 243 \\ 7 \ 378 \ 5 \ 6 \ 780 \end{array}$

WHIZZ-KIDS WORKSHEET!

- THIS IS THE FIRST OF 30 W.K.W.S. WORK THROUGH THEM, RECORD YOUR RESULTS ON THE GRAPH AT THE BACK OF THE BOOK, & WATCH YOURSELF IMPROVE!

NIFTY NUMBERS

$15 \div 5 = 3$ $12 \times 7 = 84$
 $3 \times 12 = 36$ $4 + 28 = 32$
 $16 \div 7 = 23$ $19 - 17 = 2$
 $20 - 17 = 3$ $45 \div 9 = 5$
 $5 \times 0 = 0$ $55 \div 5 = 11$
 $36 \div 9 = 4$ $31 + 11 = 42$
 $13 + 8 = 21$ $12 - 12 = 0$
 $2 \times 26 = 52$ $13 + 13 = 26$
 $4 \times 15 = 60$ $16 \times 3 = 48$
 $99 \div 11 = 9$ $14 + 26 = 40$

WORDY WHIMS

4 PLUS 2 = 6
10 MINUS 5 = 5
3 LESS THAN 15 = 12
FIVE FIVES = 25
HOW MANY 2'S IN 20 10
DIVIDE 24 BY 3 8
PRODUCT OF 3 AND 9 27
NINE PLUS 6 = 15
24 TAKEAWAY 9 = 15
3 MORE THAN 5 = 8

POSSIBLE PATTERNS

- 2, 4, 6, 8, 10
5, 10, 15, 20, 25
1, 7, 13, 19, 25
50, 100, 200, 400, 800
15, 35, 55, 75, 95
1, 6, 10, 13, 15, 16
1, 3, 7, 15, 31, 63
100, 80, 60, 40, 20
1, 4, 10, 22, 46, 94
2, 5, 9, 14, 20, 27

EXTRA EXAMPLES

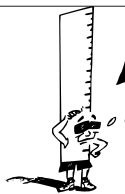
$5 + 12 = 9 + 8$
 $25 - 9 = 8 \times 2$
TOTAL OF 5, 7, 8, 4 24
DIFFERENCE BETWEEN 16 & 9 7
 $210 \div 0.12 = 222$
 $144 - 144 = 0$
FOUR LOTS OF 25 EQUAL 100
 $10 \times 10 \times 10 = 1000$
HALF OF 4 2
\$10 DIVIDED INTO 5 PEOPLE \$2

THE QUINTUS QUIZ

$\begin{array}{r} 55 \\ 7 \overline{)385} \end{array}$ $\begin{array}{r} 128 \\ 6 \overline{)768} \end{array}$ $\begin{array}{r} 22 \quad 33 \\ 4 \overline{)88} \quad 3 \overline{)99} \\ \hline 181 \\ 11 \overline{)1991} \end{array}$

NUMBER OF MISTAKES





RODNEY STANDS BACK TO CONTEMPLATE SOME ELEMENTS OF TRUTH!

- THE SET OF MY TEACHERS IS { D, J, E, L, A, I, N, E, M, C, A, D, D, I, T, I, O, N - YOUR ANSWERS WILL DIFFER TO THESE }
- THE SET OF MY CLOSE FAMILY IS { M, U, M, D, A, D, R, I, T, A, R, U, L, E, R - YOUR ANSWERS WILL DIFFER TO THESE }
- THE SET OF MY FRIENDS IS { M, A, X, W, E, L, L, D, I, V, I, N, E, D, I, A, N, N, E - YOUR ANSWERS WILL DIFFER TO THESE }
- THE SET OF MY FAVORITE THINGS IS { C, A, L, C, U, L, A, T, O, R, P, R, O, T, R, A, C, T, O, R - YOUR ANSWERS WILL DIFFER TO THESE }
- THE SET OF MY CAREER AMBITIONS IS { M, O, R, E, M, I, G, H, T, Y, M, E, A, S, U, R, I, N, G - YOUR ANSWERS WILL DIFFER TO THIS }

LIST THE SET OF STUDENTS IN OUR CLASS WHOSE FIRST NAME STARTS WITH THE LETTER ;

- N** { NIGEL, NATHAN, NGARIE - YOUR ANSWER WILL DIFFER }
- T** { TYRA, TENSING - YOUR ANSWER WILL DIFFER }
- Z** { ZENA, ZAC - YOUR ANSWER WILL DIFFER }

LIST THE SET OF

- OUR T.V. CHANNELS { T, V, I, T, V, 2, T, V, 3, P, R, I, M, E, S, K, Y }
- OUR SCHOOL HOLIDAYS { D, E, C, A, P, R, I, L, J, U, L, Y, S, E, P, T }
- LETTERS IN THE WORD 'TEENRAGER' { T, E, N, R, A, G }
- LETTERS IN THE WORD 'IBBIDDIB' { I, B, D }

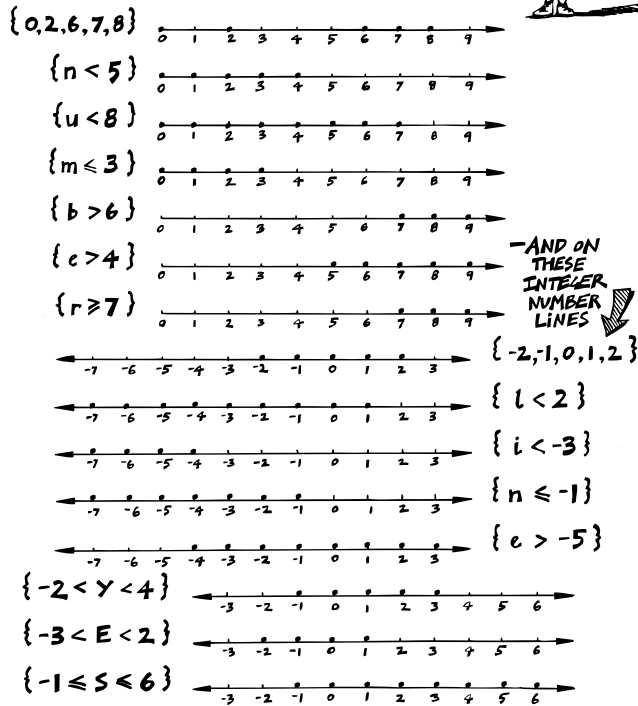
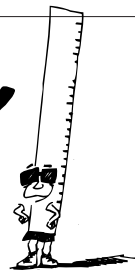
P = { 1, 2, 3, 4, 5, 6 }	Q = { 2, 4, 6, 8, 10 }	ELEMENTS IN BOTH SETS = { 2, 4, 6 }
R = { 10, 9, 8, 7, 6 }	S = { 3, 6, 9, 12 }	ELEMENTS IN BOTH SETS = { 6, 9 }
X = { 5, 8 }	Y = { 4, 7, 9 }	ALL ELEMENTS IN X OR Y = { 4, 5, 7, 8, 9 }
Z = { 0, 1, 2 }	A = { 1, 2, 3 }	ALL ELEMENTS IN A OR Z = { 0, 1, 2, 3 }

NOTE: THE ORDER OF THE ELEMENTS IN A SET DOES NOT MATTER

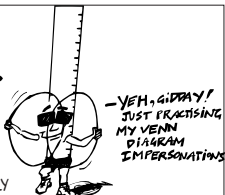
22 ↔ 23
24 ↔ 25

YO! RODNEY RULER IS BACK, WITH SOME... MAIN LINE MATHS!

- PLOT EACH SET ON THE WHOLE NUMBER LINE GIVEN.



YO! RODNEY RULER IS BACK AGAIN WITH SOME... SIZZLER SETS!

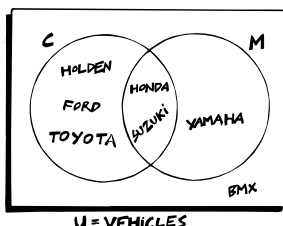
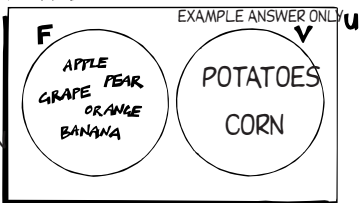


EXAMPLE ANSWER ONLY

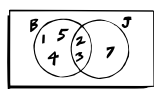
MY NAME IS KIM FREAN
THERE ARE 8 LETTERS IN MY NAME
PLACE THE LETTERS INSIDE THE CIRCLE
IN THE VENN DIAGRAM. U IS THE SET OF ALL LETTERS

- HERE IS ANOTHER VENN DIAGRAM

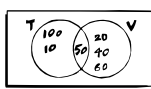
HOW MANY IN SET F? 5
GIVE A NAME TO SET F
F = { FRUIT }
WHAT WOULD BE A GOOD NAME FOR THE UNIVERSAL SET?
FOOD FROM THE GARDEN
V IS THE SET OF VEGETABLES
I LIKE - FILL IN THE V CIRCLE



C IS THE SET OF CARS
M IS THE SET OF MOTORCYCLES
WHAT BELONGS TO SET C?
HOLDEN, FORD, TOYOTA, HONDA, SUZUKI
WHAT BELONGS TO SET M?
HONDA, SUZUKI, YAMAHA
WHICH COMPANIES MAKE BOTH CARS & MOTORCYCLES?
HONDA, SUZUKI
THIS IS THE INTERSECTION SET
WHY IS BMX OUTSIDE THE CIRCLES?
IT IS NOT MOTOR POWERED



B = { 1, 2, 3, 4, 5 } J = { 2, 3, 7 }
INTERSECTION = { 2, 3 }



T = { 10, 50, 100 } V = { 20, 40, 50, 60 }
INTERSECTION = { 50 }

AND FINALLY...

SIMPLY ALGEBRA!

$\text{Apple} + \text{Apple} + \text{Apple} = 3 \text{ Apples}$

1 APPLE AND 1 APPLE AND 1 APPLE...
... YOU HAVE 3 APPLES

$a + a + a = 3a$ $b + b + b + b + b = 5b$
 $c + c + c + c = 4c$ $d + d + d + d + d + d + d = 8d$
 $e + e + e + e + e + e + e + e + e + e = 12e$

$2f + f = 3f$ $2g + 3g = 5g$
 $6h + 3h = 9h$ $5i + 8i = 13i$
 $7j + 14j = 21j$ $k + 4k + 6k = 11k$
 $2l + 2l + 2l = 6l$ $8m + 7m = 15m$

$\text{Doughnut} + \text{Doughnut} + \text{Doughnut} - \text{Doughnut} = 2 \text{ Doughnuts}$

YOU'VE GOT 3 DOUGHNUTS, EAT TWO, YOU HAVE 1 DOUGHNUT

- NOW SIMPLIFY

$3d - 2d = d$ $3e - 3e = 0$
 $13p - 2p = 11p$ $16q - 2q = 14q$
 $7r - 4r = 3r$ $9s - 7s = 2s$
 $8t - 3t = 5t$ $16v - 5v = 11v$
 $14x - x = 13x$ $12y - 11y = y$

WHAT DO MONSTERS READ IN THE NEWSPAPER?

- SIMPLIFY THESE EXPRESSIONS TO FIND THE ANSWER

H $3n + 4n = 7n$	T $11n - n = 10n$
E $6n + 8n = 14n$	O $9n - 4n = 5n$
F $4n + 5n = 9n$	S $15n - 7n = 8n$
C $n + 2n + 3n = 6n$	R $3n - 2n - n = 0$

THE HORRORSCOPES
 $12n \quad 7n \quad 19n \quad 7n \quad 5n \quad 0 \quad 5n \quad 0 \quad 8n \quad 6n \quad 5n \quad 9n \quad 14n \quad 8n$



WHIZZ-KIDS WORKSHEET!

2

NIFTY NUMBERS

$$\begin{array}{l} 7 + 8 = 15 \\ 9 - 1 = 8 \\ 8 \times 6 = 48 \\ 9 \div 3 = 3 \\ 6 + 5 = 11 \\ 5 - 2 = 3 \\ 4 \times 7 = 28 \\ 7 \div 1 = 7 \\ 3 + 9 = 12 \\ 9 + 9 = 18 \end{array}$$

DANDY DECIMALS

$$\begin{array}{l} 0.4 + 0.1 = 0.5 \\ 0.3 + 0.3 = 0.6 \\ 0.4 - 0.1 = 0.3 \\ 0.3 - 0.3 = 0 \\ 1.2 + 0.7 = 1.9 \\ 1.8 - 0.7 = 1.1 \\ 3 \times 0.2 = 0.6 \\ 2 \times 0.4 = 0.8 \\ 0.6 = 0.3 \quad 1.2 = 0.6 \\ 2 \quad 2 \end{array}$$

RADICAL ROMANS

$$\begin{array}{l} III = 3 \\ V = 5 \\ VII = 7 \\ X = 10 \\ XI = 11 \\ II = 2 \\ IV = 4 \\ VIII = 8 \\ XII = 12 \\ XX = 20 \end{array}$$

EXTRA EXAMPLES

$$\begin{array}{l} 123 + 200 = 323 \\ 300 + 300 = 600 \\ 200 - 185 = 15 \\ 300 - 140 = 160 \\ 40 \times 5 = 200 \\ 90 \times 10 = 900 \\ 50 \div 5 = 10 \\ 1200 \div 10 = 120 \\ 333 + 222 = 555 \\ 543 - 345 = 198 \end{array}$$

THE QUINTUS QUIZ

I LEFT HOME AT 8.00
IT TOOK 60 MINUTES TO
GET TO SCHOOL. SCHOOL WENT
FOR 6 HOURS. SUPPER
WAS AT 8.30 TODAY. I WAS
OUT OF BED FOR 15 HOURS.

- MONDAY -
OUT OF BED 6:00 a.m.
LEFT HOME 8:00
GOT TO SCHOOL 9:00
SCHOOL FINISHED 3:00
ARRIVED HOME 4:00
SUPPERTIME 8:30
INTO MY BED 9:00

NUMBER OF MISTAKES _____

ORDER COUNTS!

"MULTIPLY & DIVIDE BEFORE YOU ADD & SUBTRACT"



$$\begin{array}{lll} 9 + 6 \times 2 = 21 & 7 \times 3 + 2 = 23 & 7 + 3 \times 2 = 13 \\ 6 + 9 \times 2 = 24 & 8 \times 5 + 6 = 46 & 8 + 5 \times 6 = 38 \\ 4 - 1 \times 3 = 1 & 20 \times 2 - 4 = 36 & 20 - 2 \times 4 = 12 \\ 10 - 3 \times 3 = 1 & 9 \times 2 - 3 = 15 & 9 - 2 \times 3 = 3 \\ 20 - 5 \times 4 = 0 & 40 \div 4 + 5 = 15 & 60 \div 6 - 7 = 3 \end{array}$$

COMPLETE THE EQUATIONS BELOW BY USING +, -, x, ÷ SIGNS IN THE Δ!

$$\begin{array}{ll} 5 \times 4 + 8 = 28 & 10 \times 3 + 2 = 32 \\ 48 \div 6 - 3 = 5 & 63 \div 9 - 1 = 6 \\ 1 + 4 \times 9 = 37 & 7 + 8 \div 2 = 11 \\ 80 - 8 \times 3 = 56 & 76 - 10 \times 3 = 46 \\ 12 + 3 + 4 = 19 & 5 \times 4 \times 1 = 20 \end{array}$$

WHAT COMES FIRST? DO THESE SUMS TO FIND THE ANSWER!

- A $(6+3) \times 2 = 18$
- B $(8-4) \times 5 = 20$
- C $3 \times (4+1) = 15$
- E $8 \times (9-7) = 16$
- H $2 \times 5 + 4 = 14$
- K $5 \times 3 + 2 = 17$
- N $6 \times 4 - 5 = 19$
- O $7 + 1 \times 6 = 13$
- P $6 + 8 \times 3 = 30$
- R $9 + 2 \times 7 = 23$
- S $(1+4)^2 = 25$
- T $3^2 + 2 = 11$
- W $4^2 - 4 = 12$
- Y $5^2 + 6^2 = 61$

BRACKETS THEN POWERS
20 23 18 15 17 16 11 25 11 14 16 19 30 13 12 16 23 25

30 ← → 31
32 ← → 33

ZANNY ZELDA ZERO



$$\begin{array}{ll} 13 + 18 = 31 & 25 + 61 = 86 \\ 1018 + 0 = 1018 & 13 + 0 = 13 \\ 0 + 25 = 25 & 0 + 118 = 118 \\ 752 + 0 = 752 & 19164 + 0 = 19164 \\ 0 + 999 = 999 & 0 + 23456 = 23456 \end{array}$$

"A NUMBER STAYS THE SAME WHEN ADDED TO ZERO"

$$\begin{array}{lll} 6-4 = 2 & 15-8 = 7 & 406 \times 0 = 0 \\ 6-0 = 6 & 15-0 = 15 & 0 \times 51 = 0 \\ 194-0 = 194 & 2013-0 = 2013 & 0 \times 0.2 = 0 \\ 8 \times 9 = 72 & 12 \times 11 = 132 & 2085 \times 0 = 0 \\ 8 \times 0 = 0 & 12 \times 0 = 0 & 0 \times 345 = 0 \\ 32 \times 0 = 0 & 167 \times 0 = 0 & 0 \times 9.03 = 0 \end{array}$$

"ANY NUMBER MULTIPLIED BY ZERO EQUALS ZERO"

AND NOW FOR... ZELDA'S NAUGHTY WEE PUZZLE!

- A $9-5 \times 0 = 9$
- G $0 + 4 \times 2 = 8$
- H $0 \times 10 + 2 = 2$
- I $20 + 0 - 14 - 0 = 6$
- O $2 + 0 + 3 = 5$
- N $12 - 5 + 0 \times 3 = 7$
- T $5 - 0 + 3 + 0 - 4 = 4$
- U $9 + 2 \times 0 + 3 - 2 = 10$
- Y $6 \times 5 \times 0 \times 4 = 0$
- R $32 \div 4 \div 8 = 1$

"NAUGHTY NOTHING TURNS INTO NAUGHTY NAUGHTY!"

7 10 4 4 0 7 5 4 2 6 7 8 4 10 1 7
6 7 4 5 7 9 10 8 2 4 0 7 5 10 8 2 4

Oh La La!

HEY ZELDA, HAVE YOU GOT SOME NUMBER PUZZLES FOR US?

QUI QUI! START BY COMPLETING THE SUMS BELOW TO MAKE THEM EQUAL 15



$$\begin{array}{lll} 27 - 12 & 15 - 0 & 30 \div 2 \\ 9 + 6 & 5 \times 3 & 7 + 8 & 60 - 45 \\ 3 + 12 & 22 - 7 & 13 + 2 & 2 \times 3 + 9 \\ 2 \times 4 + 7 & 25 - 2 \times 5 & 5 \times 8 - 25 & 4^2 - 1 \end{array}$$

NOW PAIR THE SUMS BELOW THAT EQUAL THE SAME NUMBER!

6 + 8	○	○	$(9+11) \div 10$
12 - 4	○	○	16 - 13
15 ÷ 5	○	○	64 ÷ 8
12 × 4	○	○	28 ÷ 2
$(29-7) \div 11$	○	○	6 × 8

NEXT, UNDERLINE THE SUMS THAT EQUAL 12 & CIRCLE THOSE THAT EQUAL 9.

$$\begin{array}{llllll} 8+4 & 63 \div 7 & \frac{1}{2} \text{ OF } 8 \times 3 & (18+6) \div 2 & 9+3 & \\ 57-45 & 4 \times 3 & 18-6 & 8+0 & 54-45 & \\ 5+4 & 9-9 & 27 \div 3 & 60 \div 5 & (17+5)-12 & \end{array}$$

HOW MANY DIFFERENT NUMBERS CAN YOU MAKE USING ONLY THE NUMBER 4 FOUR TIMES!

$$\begin{array}{ll} 4 \div 4 + 4 - 4 = 1 & (4+4) \quad 4=5 \\ (4 \times 4) + (4 \times 4) = 32 & (4+4) \quad 4+4=6 \\ 4 - 4 + 4 \times 4 = 16 & 4+4 \quad 4=7 \\ 4-4+4-4=0 & 4+4+4-4=8 \\ 4 \quad 4+4 \quad 4=2 & 4 \quad 4+4+4=9 \\ (4+4+4+4) \quad 4=3 & \end{array}$$

THERE ARE STILL MANY MORE

SOLVING is THE BEST SOLUTION

AN EQUATION is A MATHS SENTENCE THAT CONTAINS AN EQUALS SIGN

EXERCISE EASY:

$p+8=9$ $p=\frac{1}{3}$ $2+a=6$ $a=\frac{4}{8}$ $t+5=10$ $t=\frac{5}{3}$
 $q+7=10$ $q=\frac{3}{2}$ $z+4=12$ $z=\frac{8}{1}$ $n+9=12$ $n=\frac{3}{4}$
 $3+h=4$ $h=\frac{1}{x}$ $x+2=8$ $x=\frac{6}{e}$ $e-2=1$ $e=\frac{3}{r}$
 $c-2=4$ $c=\frac{6}{k}$ $k-1=6$ $k=\frac{7}{r}$ $r-6=2$ $r=\frac{8}{v}$
 $6-3=d$ $d=\frac{3}{m}$ $m-1=4$ $m=\frac{5}{v}$ $v-1=19$ $v=\frac{20}{}$

EXERCISE EXCITED:

$2a=10$ $a=\frac{5}{}$ $\frac{n}{2}=8$ $n=16$
 $4b=40$ $b=\frac{10}{}$ $\frac{p}{3}=10$ $p=30$
 $6c=18$ $c=\frac{3}{}$ $\frac{r}{4}=6$ $r=24$
 $3d=24$ $d=\frac{8}{}$ $\frac{s}{5}=12$ $s=60$
 $5e=30$ $e=\frac{6}{}$ $\frac{t}{9}=4$ $t=36$
 $7f=49$ $f=\frac{7}{}$ $\frac{u}{10}=1$ $u=10$
 $8g=88$ $g=\frac{11}{}$
 $10h=200$ $h=\frac{20}{}$
 $9i=9$ $i=\frac{1}{}$



SUZY SOLVER

WHY WOULD YOU NEVER GO HUNGRY IN THE DESERT?

- SOLVE THE EQUATIONS TO FIND OUT ...

$b+13=16$ $b=3$ $16+c=23$ $c=7$ $5x+d=20$ $d=4$
 $21-f=20$ $f=1$ $29-n=27$ $n=2$ $r-4=9$ $r=13$
 $12x+t=60$ $t=5$ $88\div w=8$ $w=11$ $48\div h=4$ $h=12$
 $17+s=23$ $s=6$ $18+u=33$ $u=15$ $0+13=29$ $0=16$
 $e-4=5$ $e=9$ $9\times i=72$ $i=8$ $930-a=920$ $a=10$

B E C A U S E O F T H E
 S A N D W H I C H I S T H E R E

PRINT THE POSTERBOARDS.

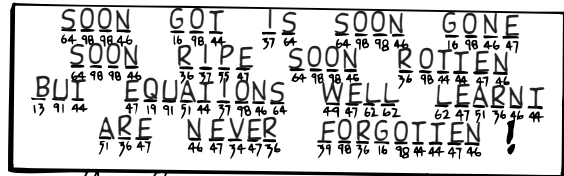
EXERCISE EXTENDED:

$y-3=9$	$y=12$	$x-24=40$	$x=64$
$b+11=20$	$b=9$	$\frac{1}{2}n=16$	$n=32$
$15-m=3$	$m=12$	$5s+1=6$	$s=1$
$23-d=8$	$d=15$	$3e+4=10$	$e=2$
$t\times t=100$	$t=10$	$2h+9=15$	$h=3$
$w\div 3=9$	$w=27$	$4k+1=17$	$k=4$
$g+g=16$	$g=8$	$3f-2=10$	$f=4$
$r-7=8$	$r=15$	$4a+2=22$	$a=5$
$12-p=10$	$p=2$	$12v+3=51$	$v=4$
$q+19=42$	$q=23$	$5c+4=39$	$c=7$

SOLVE ANY EQUATION, AND

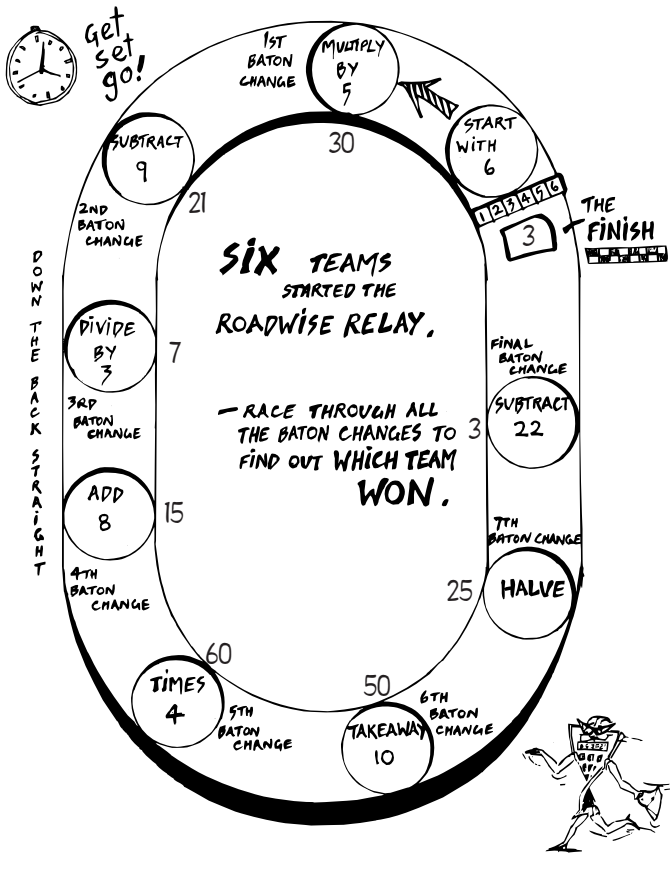
- WRITE THE LETTER ABOVE THE CORRECT ANSWER ON THE BOARD.

$20+45+V=99$ $502+199+F=740$ $4N=184$
 $78+35+T=157$ $R+226+372=674$ $90=882$
 $A+69+89=209$ $5Q=95$ $8E=376$
 $U+98+26=215$ $3G=48$ $7L=434$
 $100+P+200=355$ $2I=74$ $6W=294$
 $215+5+308=587$ $10B+18=148$



34 ↔ 35
36 ↔ 37

THE "ROADWISE RELAY"



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$2+3=5$
 $5-1=4$
 $3\times 4=12$
 $8\div 2=4$
 $4+9=13$
 $9-5=4$
 $6\times 6=36$
 $5\div 1=5$
 $7+8=15$
 $9+4=13$

3

VISCOUS VARIABLES

$a+a=2a$
 $b+b=2b$
 $2c+c=3c$
 $2d+2d=4d$
 $4e+3e=7e$
 $f-f=0$
 $2g-g=g$
 $4h-h=3h$
 $3i-2i=i$
 $j+j+j=3j$

MONEY MIXTURES

$10c+10c=20c$
 $20c-10c=10c$
 $2\times 15c=30c$
 $5\times 20c=100c$
 $20c+20c=40c$
 $50c-20c=30c$
 $\$6+\$5=\$11$
 $\$8-\$7=\$1$
 $\$10\times 8=\80
 $\$10\div 5=\2

EXTRA EXAMPLES

$100+123=223$
 $200+300=500$
 $100-85=15$
 $200-160=40$
 $50\times 7=350$
 $80\times 10=800$
 $30\div 3=10$
 $60\div 10=6$
 $111+111=222$
 $234-134=100$

THE QUINTUS QUIZ

- HOW MANY DAYS IN FEBRUARY? 28
- WHAT DAY IS MARCH 12th? TUESDAY
- WHAT DATE IS THE SECOND THURSDAY OF MARCH? 14th
- WHAT DATE IS THE FOURTH MONDAY OF FEBRUARY? 25th
- HOW MANY FRIDAYS IN MARCH? 5

FEBRUARY						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

MARCH						
M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NUMBER OF MISTAKES _____

LET'S GET TO-RA POINT WITH DAVE!!



- DAVE'S EXCELLENT DECIMAL ADDITION

$\begin{array}{r} 0.1 \\ 0.1 \\ \hline 0.2 \end{array}$	$\begin{array}{r} 0.1 \\ 0.3 \\ \hline 0.4 \end{array}$	$\begin{array}{r} 0.6 \\ 0.2 \\ \hline 0.8 \end{array}$	$\begin{array}{r} 0.5 \\ 0.5 \\ \hline 1.0 \end{array}$	$\begin{array}{r} 1.2 \\ 2.3 \\ \hline 3.5 \end{array}$
$\begin{array}{r} 4.1 \\ 3.6 \\ \hline 7.7 \end{array}$	$\begin{array}{r} 3.5 \\ 2.2 \\ \hline 5.7 \end{array}$	$\begin{array}{r} 4.15 \\ 3.64 \\ \hline 7.79 \end{array}$	$\begin{array}{r} 5.61 \\ 2.08 \\ \hline 7.69 \end{array}$	$\begin{array}{r} 4.68 \\ 5.12 \\ \hline 9.80 \end{array}$
$\begin{array}{r} 3.2 \\ 3.4 \\ \hline 6.6 \end{array}$	$\begin{array}{r} 5.3 \\ 4.5 \\ \hline 9.8 \end{array}$	$\begin{array}{r} 1.14 \\ 2.12 \\ \hline 3.26 \end{array}$	$\begin{array}{r} 2.06 \\ 5.13 \\ \hline 7.19 \end{array}$	$\begin{array}{r} 2.25 \\ 6.35 \\ \hline 8.60 \end{array}$

- DAVE'S DISTINGUISHED DECIMAL SUBTRACTION!

$\begin{array}{r} 0.3 \\ -0.1 \\ \hline 0.2 \end{array}$	$\begin{array}{r} 0.9 \\ -0.6 \\ \hline 0.3 \end{array}$	$\begin{array}{r} 0.8 \\ -0.7 \\ \hline 0.1 \end{array}$	$\begin{array}{r} 3.8 \\ -2.6 \\ \hline 1.2 \end{array}$	$\begin{array}{r} 9.8 \\ -5.4 \\ \hline 4.4 \end{array}$
$\begin{array}{r} 0.87 \\ -0.42 \\ \hline 0.45 \end{array}$	$\begin{array}{r} 0.77 \\ -0.15 \\ \hline 0.62 \end{array}$	$\begin{array}{r} 0.83 \\ -0.51 \\ \hline 0.32 \end{array}$	$\begin{array}{r} 2.57 \\ -1.41 \\ \hline 1.16 \end{array}$	$\begin{array}{r} 4.68 \\ -3.41 \\ \hline 1.27 \end{array}$
$\begin{array}{r} 6.53 \\ -3.53 \\ \hline 3.00 \end{array}$	$\begin{array}{r} 7.4 \\ -0.4 \\ \hline 7.0 \end{array}$	$\begin{array}{r} 6.5 \\ -0.9 \\ \hline 5.6 \end{array}$	$\begin{array}{r} 8.2 \\ -0.6 \\ \hline 7.6 \end{array}$	$\begin{array}{r} 10.6 \\ -2.7 \\ \hline 7.9 \end{array}$

SOME POINTED OBJECTS!

A	$0.2 + 0.1$
P	$0.2 - 0.1$
N	$0.65 + 0.33$
L	$0.65 - 0.33$

L	$0.14 + 0.26$
E	$0.4 + 0.2$
S	$0.4 - 0.2$
R	$0.87 + 0.09$
F	$0.87 - 0.09$
T	$0.48 + 0.32$

A	SPEAR
P	PIN
N	CLASS TEST
L	NAIL

38 ↔ 39
40 ↔ 41

- TONNES OF TENS -

$8.04 \times 10 = 80.4$	$9.765 \times 1000 = 9765$	$79.1 \div 100 = 0.791$
$0.84 \times 10 = 8.4$	$0.97 \times 1000 = 970$	$7901 \div 100 = 79.01$
$8.914 \times 100 = 891.4$	$8.04 \div 10 = 0.804$	$980.1 \div 1000 = 0.9801$
$0.894 \times 100 = 89.4$	$804 \div 10 = 80.4$	$9088 \div 1000 = 9.088$
$0.8 \times 100 = 80$	$0.84 \div 10 = 0.084$	$0.7 \div 1000 = 0.0007$

WHY WERE THE STUDENT AND THE WITCH SMILING?

LINE UP EACH SUM WITH ITS CORRECT SOLUTION TO FIND THE ANSWER!

5.6×100	13	E	5.6
0.56×10000	10	T	0.0056
$560 \div 10$	3	P	560 (THIS ONE IS DONE FOR YOU!)
$5.6 \div 1000$	6	D	3.12
56×1000	9	P	312
0.0056×10	18	O	5600
$56000 \div 10000$	16	P	0.000312
$56 \div 100$	1	O	0.00312
0.56×1000000	17	G	0.056
31.2×1000	2	N	31200
$3.12 \div 100$	1	A	3120
$0.00312 \div 10$	5	B	56
3.12×100000	15	S	0.56
0.0312×100	15	H	0.0312
$3120 \div 1000000$	11	L	31.2
$31200 \div 1000$	12	A	312000
0.312×100000	7	S	56000
$3120 \div 10$	12	L	560000

B O T H P A S S E D S P E L L I N G!

did you?

Now write these numbers using words.
 560 FIVE HUNDRED AND SIXTY
 3124 THREE THOUSAND ONE HUNDRED AND TWENTY FOUR
 87.9 EIGHTY SEVEN POINT NINE
 7002.8 SEVEN THOUSAND AND TWO POINT EIGHT

- DAVE'S DECIMALS



$\begin{array}{r} 0.23 \\ \times 2 \\ \hline 0.46 \end{array}$	$\begin{array}{r} 0.72 \\ \times 4 \\ \hline 2.88 \end{array}$	$\begin{array}{r} 0.63 \\ \times 3 \\ \hline 1.89 \end{array}$	$\begin{array}{r} 0.91 \\ \times 5 \\ \hline 4.55 \end{array}$	$\begin{array}{r} 0.82 \\ \times 6 \\ \hline 4.92 \end{array}$
$\begin{array}{r} 0.16 \\ \times 7 \\ \hline 1.12 \end{array}$	$\begin{array}{r} 0.76 \\ \times 6 \\ \hline 4.56 \end{array}$	$\begin{array}{r} 0.99 \\ \times 8 \\ \hline 7.92 \end{array}$	$\begin{array}{r} 0.49 \\ \times 4 \\ \hline 1.96 \end{array}$	$\begin{array}{r} 0.53 \\ \times 5 \\ \hline 2.65 \end{array}$
$\begin{array}{r} 7.13 \\ \times 3 \\ \hline 21.39 \end{array}$	$\begin{array}{r} 4.21 \\ \times 8 \\ \hline 33.68 \end{array}$	$\begin{array}{r} 2.98 \\ \times 7 \\ \hline 20.86 \end{array}$	$\begin{array}{r} 3.68 \\ \times 8 \\ \hline 29.44 \end{array}$	$\begin{array}{r} 2.34 \\ \times 9 \\ \hline 21.06 \end{array}$

- WHAT DID THE DOG SAY WHEN IT SAT ON THE SANDPAPER?

X	4	.1	.02	.06	.9	8	.6	.3	.05
3	12	.3	.06	.18	2.7	24	1.8	.9	.15
2	.8			.012	.18	1.6			
4		.04	.008	.024	3.6	32	.12	.02	
.8		.08		.048		6.4		.04	
.5		.05		.03		4	.15	.025	
6		.6		.36		48	1.8	.3	
2		.2		.12		16	.6	.1	
.9		.09				7.2		.27	

SHADE IN ALL THE MISTAKES TO FIND OUT!
(YOU SHOULD FIND 30 MISTAKES)



- DAVE'S DECIMAL ALL-SORTS DO-DA-CRAZY-DECIMAL RUIDES!



$\begin{array}{r} 2.06 \\ + 7.18 \\ \hline 9.24 \end{array}$	$\begin{array}{r} 1.87 \\ + 0.59 \\ \hline 2.46 \end{array}$	$\begin{array}{r} 9.58 \\ + 7.69 \\ \hline 17.27 \end{array}$	$\begin{array}{r} 8.72 \\ - 3.14 \\ \hline 5.58 \end{array}$	$\begin{array}{r} 16.85 \\ - 11.58 \\ \hline 5.27 \end{array}$
$\begin{array}{r} 3.5 \\ \times 2 \\ \hline 7.0 \end{array}$	$\begin{array}{r} 5.3 \\ \times 2 \\ \hline 10.6 \end{array}$	$\begin{array}{r} 4.2 \\ \times 3 \\ \hline 12.6 \end{array}$	$\begin{array}{r} 2.4 \\ \times 5 \\ \hline 12.0 \end{array}$	$\begin{array}{r} 1.6 \\ \times 5 \\ \hline 8.0 \end{array}$
$4 \overline{) 8.48}$	$6 \overline{) 6.72}$	$8 \overline{) 10.56}$	$10 \overline{) 39.7}$	$12 \overline{) 26.472}$
$\begin{array}{r} 25.6 \\ - 17.4 \\ \hline 8.2 \end{array}$	$\begin{array}{r} 43.8 \\ - 27.9 \\ \hline 15.9 \end{array}$	$\begin{array}{r} 39.7 \\ - 32.8 \\ \hline 6.9 \end{array}$	$\begin{array}{r} 93.25 \\ + 58.89 \\ \hline 152.14 \end{array}$	$\begin{array}{r} 75.64 \\ + 38.36 \\ \hline 114.00 \end{array}$

NOW DO THESE SUMS TO DISCOVER A FAMOUS DECIMAL YEAR IN N.Z.!

$\begin{array}{r} \$0.83 \\ + 0.67 \\ \hline \$1.50 \end{array}$	$\begin{array}{r} \$1.38 \\ + 0.62 \\ \hline \$2.00 \end{array}$	$\begin{array}{r} \$2.75 \\ - 1.35 \\ \hline \$1.40 \end{array}$	$\begin{array}{r} \$3.41 \\ - 2.76 \\ \hline \$0.65 \end{array}$
--	--	--	--

$\begin{array}{r} \$0.32 \\ \times 5 \\ \hline \$1.60 \end{array}$	$\begin{array}{r} \$1.25 \\ \times 4 \\ \hline \$5.00 \end{array}$	$7 \overline{) \$2.80}$	$6 \overline{) \$10.80}$
--	--	-------------------------	--------------------------

NINETEEN SIXTY SEVEN
 $1.8 \ 1.4 \ 1.8 \ 4 \ 5 \ 4 \ 4 \ 1.8 \ 1.6 \ 1.4 \ 6.5 \ 1.5 \ 1.6 \ 4 \ 2 \ 4 \ 1.8$

(WHY WAS IT SO IMPORTANT?)

In 1967 - New Zealand changed to decimal currency

DAVE'S DANGEROUS DECIMALS

DAVE SUGGESTS YOU USE A CALCULATOR



$$\begin{array}{r} 3619.57 \\ +1248.68 \\ \hline 4868.25 \end{array} \quad \begin{array}{r} 3594.07 \\ +1483.56 \\ \hline 5077.63 \end{array} \quad \begin{array}{r} 510.234 \\ +667.981 \\ \hline 1178.215 \end{array} \quad \begin{array}{r} 148.675 \\ +728.149 \\ \hline 876.824 \end{array}$$

$$1959.63 + 812.54 + 70.26 + 3.19 = 2845.62$$

$$\begin{array}{r} 42.65 \\ -21.88 \\ \hline 20.77 \end{array} \quad \begin{array}{r} 951.34 \\ -240.25 \\ \hline 711.09 \end{array} \quad \begin{array}{r} 73.589 \\ -14.983 \\ \hline 58.606 \end{array} \quad \begin{array}{r} 6.050 \\ -1.123 \\ \hline 4.927 \end{array}$$

$$1959.63 - 812.54 - 70.26 - 3.19 = 1073.64$$

$$\begin{array}{r} 3.04 \\ 13 \overline{)39.52} \end{array} \quad \begin{array}{r} 4.321 \\ 20 \overline{)86.420} \end{array} \quad \begin{array}{r} 4.1 \\ 0.6 \overline{)2.46} \end{array} \quad \begin{array}{r} 405.1 \\ 1.5 \overline{)607.65} \end{array}$$

WHAT'S HAPPENED TO DAVE NOW?



"HELP ME
1.25 275 -11 -0.2 2.3 -0.75
I'VE BEEN
-1.8 2.6 0 1.4 21 -1.5 0.5
FRAMED!"
1.75 0.2 -1.25 0.8 -0.5 1.9

-HERE DWELLS PASTARDLY
DAVE DECIMAL, DOBBED IN FOR
DAMAGING CLASSIFIED DECIMALS.



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{array}{l} 4+5=9 \\ 6-1=5 \\ 5 \times 4=20 \\ 3 \div 1=3 \\ 6+2=8 \\ 7-5=2 \\ 3 \times 3=9 \\ 8 \div 4=2 \\ 5+5=10 \\ 7+6=13 \end{array}$$

TRENDY TABLES

$$\begin{array}{l} 2 \times 1 = 2 \\ 2 \times 2 = 4 \\ 2 \times 3 = 6 \\ 2 \times 5 = 10 \\ 2 \times 7 = 14 \\ 2 \times 6 = 12 \\ 2 \times 9 = 18 \\ 2 \times 10 = 20 \\ 2 \times 13 = 26 \\ 2 \times 12 = 24 \end{array}$$



SOFT SUBSTITUTES

$$\begin{array}{l} a=3, a+5=8 \\ b=4, b+12=16 \\ c=8, c-1=7 \\ d=7, d-3=4 \\ e=5, 4+c=9 \\ f=2, 9-f=7 \\ g=6, 3g=18 \\ h=9, 4h=36 \\ i=1, 10i=10 \\ j=10, 5j=50 \end{array}$$

EXTRA EXAMPLES

$$\begin{array}{l} 6 \text{ ADDED TO } 27 \text{ IS } 33 \\ 3 \text{ TIMES } 18 \text{ IS } 54 \\ \$4.50 + \$6.25 = \$10.75 \\ \$5.80 + \$7.80 = \$13.60 \\ 462 = 400 + 60 + 2 \\ 500 + 20 + 6 = 526 \\ 210 + 123 = 333 \\ 157 + 225 = 382 \\ 240 - 130 = 110 \\ 188 - 66 = 122 \end{array}$$

THE QUINTUS QUIZ

-FIND THE COST FOR...

- 2 PARENTS ONLY \$6
- 1 PARENT & 1 CHILD \$4
- 2 PARENTS & 2 CHILDREN \$8
- 1 PARENT & 3 CHILDREN \$6
- 4 PARENTS & 2 CHILDREN \$14



NUMBER OF MISTAKES _____

42 ↔ 43
44 ↔ 45

\$ MONEY MATH \$

$$\begin{array}{r} \$0.38 \\ +0.12 \\ \hline \$0.50 \end{array} \quad \begin{array}{r} \$0.94 \\ +0.46 \\ \hline \$1.40 \end{array} \quad \begin{array}{r} \$0.75 \\ +0.15 \\ \hline \$0.90 \end{array} \quad \begin{array}{r} \$0.92 \\ -0.07 \\ \hline \$0.85 \end{array} \quad \begin{array}{r} \$0.44 \\ -0.29 \\ \hline \$0.15 \end{array}$$

$$\begin{array}{r} \$2.76 \\ +2.34 \\ \hline \$5.10 \end{array} \quad \begin{array}{r} \$1.79 \\ +0.81 \\ \hline \$2.60 \end{array} \quad \begin{array}{r} \$4.36 \\ -2.41 \\ \hline \$1.95 \end{array} \quad \begin{array}{r} \$7.10 \\ -5.35 \\ \hline \$1.75 \end{array} \quad \begin{array}{r} \$8.26 \\ -1.96 \\ \hline \$6.30 \end{array}$$

-FIND THE COST OF;

- 4 MATS AT \$7.25 EACH \$29
- 2 LOTS AT \$82.95 EACH \$165.90
- 6 HATS AT \$15.40 EACH \$92.40
- 900 DOTS AT 30¢ EACH \$270
- 10 RATS AT \$1.65 EACH \$16.50
- 8 LOTS AT \$54.20 EACH \$433.60
- 3 BATS AT \$98.90 EACH \$296.70
- 5 POTS AT \$48.50 EACH \$242.50

-HOW MUCH CHANGE FROM;

- \$10 WHEN YOU SPEND \$6.80 \$3.20
- \$10 WHEN YOU BUY 2 PENS AT \$1.35 EACH \$7.30
- \$20 WHEN YOU SPEND \$11.30 \$8.70
- \$20 WHEN YOU BUY 5 DISCS AT \$2.75 EACH \$6.25
- \$50 WHEN YOU BUY 3 BOOKS AT \$1.40, \$1.60, \$1.80, 3 COVERS AT 70¢ EACH AND 4 FELT TIPS AT \$3.20 EACH. \$30.30

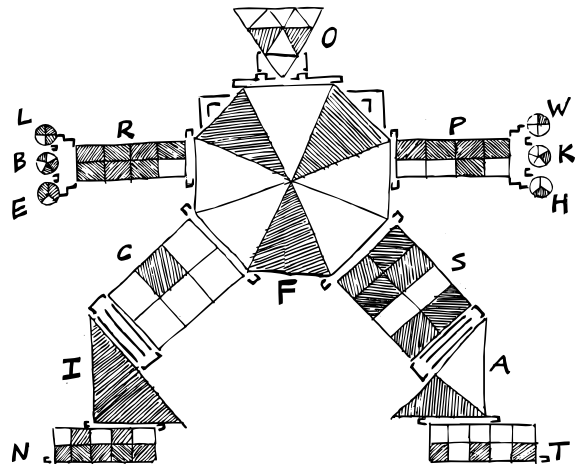
$$\begin{array}{r} \$28.76 \\ +10.79 \\ \hline \$39.55 \end{array} \quad \begin{array}{r} \$85.74 \\ +23.46 \\ \hline \$109.20 \end{array} \quad \begin{array}{r} \$64.48 \\ -16.88 \\ \hline \$47.60 \end{array} \quad \begin{array}{r} \$75.34 \\ -32.99 \\ \hline \$42.35 \end{array} \quad \begin{array}{r} \$43.70 \\ -29.90 \\ \hline \$13.80 \end{array}$$

ANSWER TO THE NEAREST DOLLAR

$$\begin{array}{l} \$3.20 + \$4.60 \approx \$8 \\ \$2.85 + \$1.20 \approx \$4 \\ \$9.60 - \$8.75 \approx \$1 \\ \$24.35 - \$12.50 \approx \$12 \end{array} \quad \begin{array}{l} \$7.35 + \$5.05 \approx \$12 \\ \$2.90 + \$2.80 \approx \$6 \\ \$6.25 - \$3.95 \approx \$2 \\ \$17.80 - \$9.20 \approx \$9 \end{array}$$

FRACTION-MAN

How much is shaded? Write the letter from each body part above the corresponding fraction.



A FRACTION IS A CHIP

$$\frac{1}{2} \quad \frac{3}{8} \quad \frac{7}{8} \quad \frac{1}{2} \quad \frac{1}{3} \quad \frac{2}{10} \quad \frac{7}{10} \quad \frac{1}{8} \quad \frac{1}{2} \quad \frac{1}{6} \quad \frac{1}{3} \quad \frac{5}{8}$$

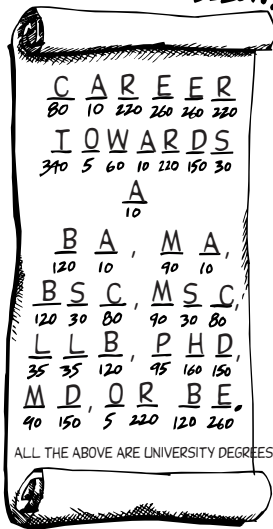
OFF THE WHOLE BLOCK

$$\frac{2}{9} \quad \frac{3}{8} \quad \frac{3}{10} \quad \frac{1}{3} \quad \frac{2}{3} \quad \frac{1}{4} \quad \frac{1}{3} \quad \frac{2}{4} \quad \frac{3}{5} \quad \frac{3}{4} \quad \frac{2}{9} \quad \frac{1}{6}$$

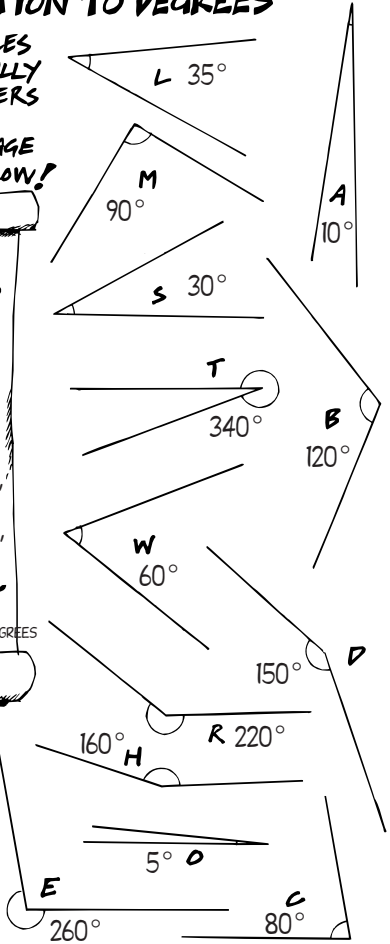
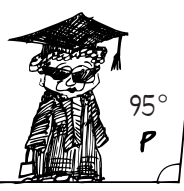


AN INTRODUCTION TO DEGREES

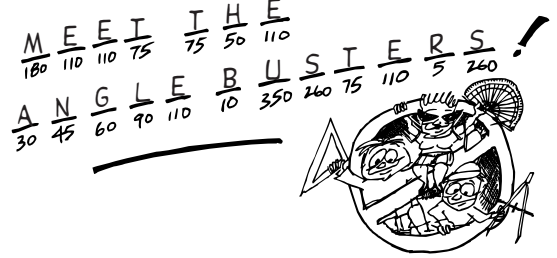
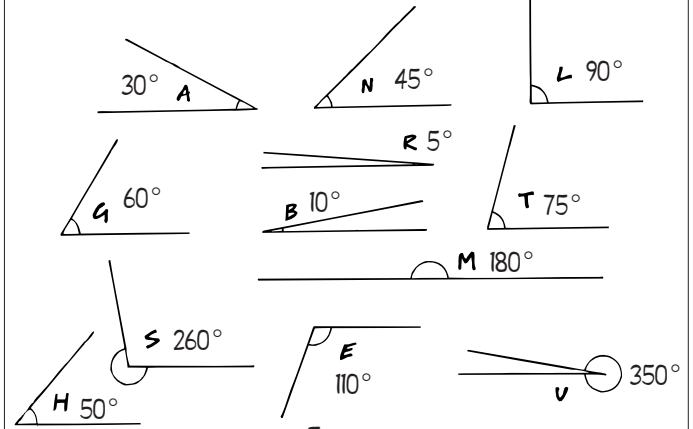
- MEASURE THE ANGLES ON THIS PAGE CAREFULLY AND WRITE THE LETTERS ABOVE THE CORRECT ANSWER IN THE MESSAGE BELOW!



ALL THE ABOVE ARE UNIVERSITY DEGREES

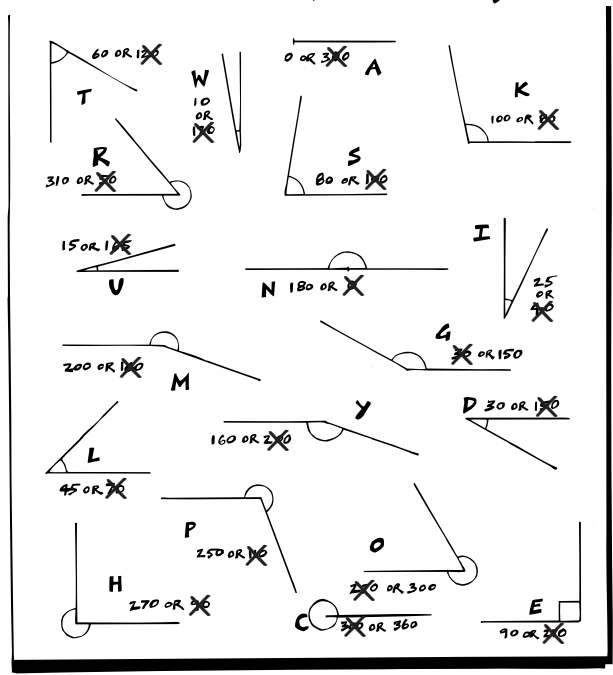


YOUR MISSION, SHOULD YOU CHOOSE TO ACCEPT IT, IS TO MEASURE ALL THE ANGLES AND WRITE THE LETTERS ABOVE THE CORRECT ANSWER IN THE CODE! (DON'T WORRY, THIS PAGE WON'T SELF-DESTRUCT!)



50 ↔ 51
52 ↔ 53

- CHOOSE THE ANGLE SIZE THAT IS THE BEST ESTIMATE OF THE ANGLE AND MATCH UP THE LETTER OF THE ANGLE WITH THE ANSWERS IN THE PUZZLE!

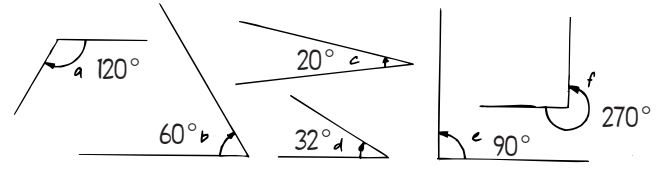


"MATHEMATICIANS KNOW ALL THE ANGLES. HOW DO YOU MEASURE UP?"
200 0 60 270 90 200 0 60 25 360 25 0 180 80 100 180 300 10
0 45 45 60 270 90 0 180 150 45 90 80 270 300 10
30 300 160 300 15 200 90 0 80 15 310 90 15 250

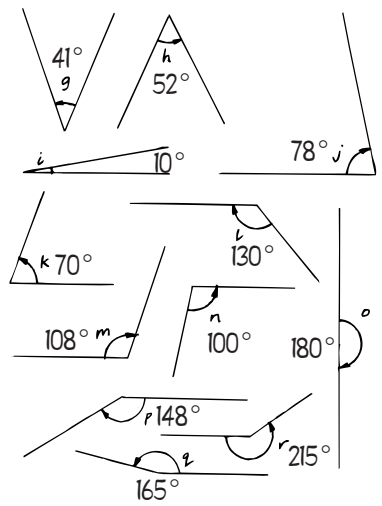
MEASURING ANGLES

ESTIMATE MEANS A GUESS (BUT NOT A WILD GUESS!) WE MEASURE ANGLE SIZE WITH A PROTRACTOR

- ESTIMATE THE SIZE OF EACH ANGLE AND WRITE YOUR GUESSES IN THE TABLE.
- ASK YOUR TEACHER FOR A PROTRACTOR THEN MEASURE EACH ANGLE CAREFULLY! RECORD EACH MEASURE IN THE TABLE.



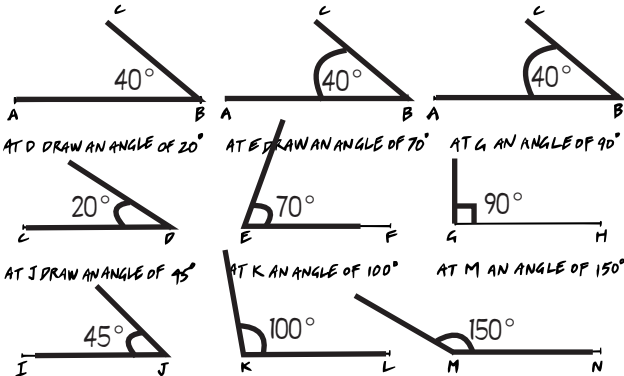
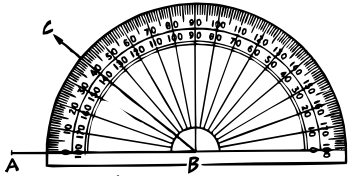
	ESTIMATE	MEASURE
a		120°
b		60°
c		20°
d		32°
e		90°
f		270°
g		41°
h		52°
i		10°
j		78°
k		70°
l		130°
m		108°
n		100°
o		180°
p		148°
q		165°
r		215°



DRAWING ANGLES... is LIKE, EXCELLENT FUN!

YOU HAVE LEARNT TO USE A PROTRACTOR TO MEASURE ANGLES. IT CAN ALSO BE USED TO HELP YOU DRAW ANGLES.

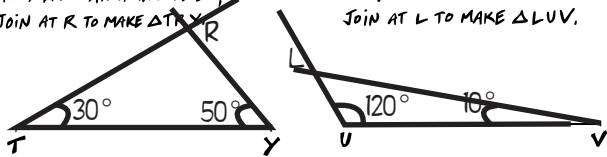
- PLACE YOUR PROTRACTOR ON AB AS SHOWN (CENTRE ON B)
- COUNT FROM 0° CLOCKWISE TO 40°, & MARK IT.
- REMOVE YOUR PROTRACTOR. DRAW THE RAY BC. THEN $\angle ABC = 40^\circ$. NOW MAKE 3 EXACT COPIES.



DRAWING TRIANGLES

AT T DRAW AN ANGLE OF 30°, AT Y DRAW AN ANGLE OF 50°, JOIN AT R TO MAKE $\triangle TXY$.

AT U DRAW AN ANGLE OF 120°, AT V DRAW AN ANGLE OF 10°, JOIN AT L TO MAKE $\triangle LUV$.



ARE WE THE RIGHT TYPES?!



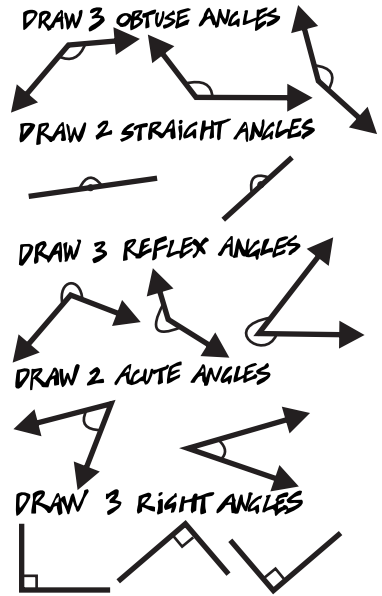
THESE ARE RIGHT

THESE ARE ACUTE

THESE ARE OBTUSE

THESE ARE REFLEX

THESE ARE STRAIGHT



NOW FILL IN THE MISSING WORD BY IDENTIFYING THE ANGLES BELOW!
"SIMPLY PERFECT"

WHICH ARE ACUTE? 	WHICH ARE REFLEX? 	WHICH ARE OBTUSE? 	WHICH ARE RIGHT?
----------------------	-----------------------	-----------------------	----------------------

54 ↔ 55
56 ↔ 57

WHIZZ-KIDS WORKSHEET! 6

NIFTY NUMBERS

- 5+10 = 15 14+8 = 22
18-9 = 9 19-6 = 13
15-12 = 3 15+12 = 27
37+12 = 49 48÷4 = 12
2×11 = 22 32-8 = 24
25+8 = 33 54÷6 = 9
6×40 = 240 22×2 = 44
15×7 = 105 15×3 = 45
48÷8 = 6 9×9 = 81
15÷5 = 3 12×12 = 144

EASY EQUATIONS

- 5 + 4 = 9
14 - 2 = 12
15 × 3 = 45
6 × 6 = 36
7 + 8 = 15
28 - 12 = 16
4 + 14 = 16 + 2
8 + 4 = 15 - 3
12 - 2 = 8 + 2
2 × 10 = 4 × 5

CALENDAR COLLECTIONS

- HOW MANY DAYS IN MAY? 31
- HOW MANY MONDAYS IN FEBRUARY? _____
- WHAT DAY WAS 31st JANUARY? _____
- HOW MANY SCHOOL DAYS IN JUNE? _____
- WHAT DATE IS THE LAST FRIDAY IN MAY? _____
- HOW MANY DAYS IN OCTOBER & NOVEMBER? 31+30=61
- HOW MANY DAYS TO THE NEXT HOLIDAY? NOT MANY I HOPE!
- HOW MANY DAYS IN A YEAR? 365 or 366 (LEAP YEAR)

MONEY MIXTURES



- FIND THE COST OF:
- 2 APPLES \$1
 - 3 ORANGES \$2.10
 - 3 BANANAS AND A PEAR \$1.95
- WHAT IS THE CHANGE FROM \$10 IF I BUY:
- 10 APPLES \$5
 - 12 ORANGES AND A PEAR \$9
 - 10 BANANAS AND AN APPLE \$5

THE ANSWERS TO THESE QUESTIONS ARE YEAR DEPENDANT

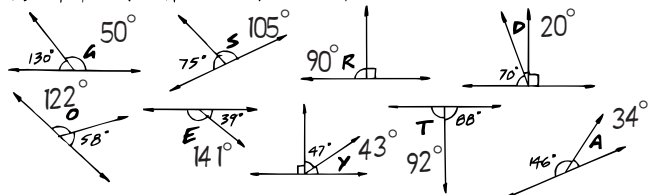
NUMBER OF MISTAKES _____

ANIMAL ANGLES

FIND THE UNKNOWN ANGLES TO SOLVE THE RIDDLES! DO NOT MEASURE

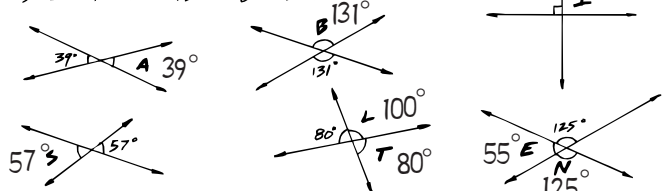
HOW DO YOU MAKE A BEAR RUN?

"SAY READY I EADY GO!"



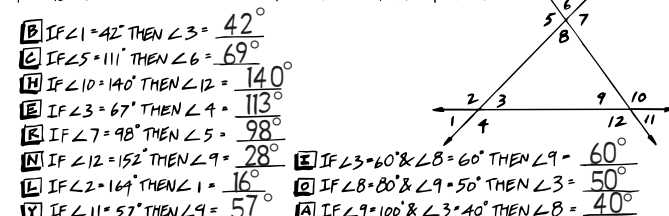
WHAT GAME DO HORSES PLAY?

"STABLE I ENNIS!"

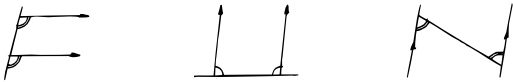


WHAT IS GREY, WEIGHS A TONNE, & HAS TWO WHEELS?

"A RHINO ON A BICYCLE!"

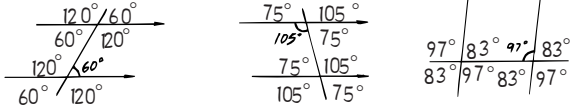


PARA-REAL-FUN ANGLES & LINES

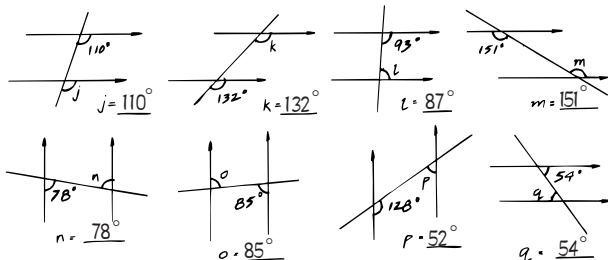


CORRESPONDING ANGLES ARE EQUAL
INTERIOR ANGLES SUM TO 180°
ALTERNATE ANGLES ARE EQUAL

WRITE IN ALL THE ANGLE MEASURES!

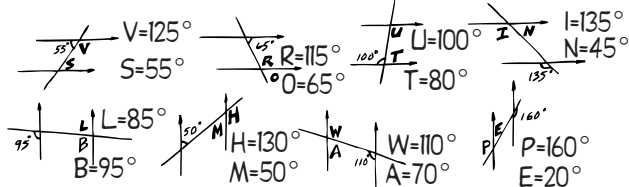


FIND THE UNKNOWN ANGLES

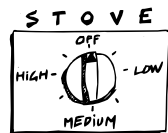


FUN FACT!

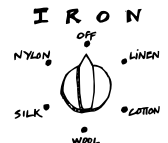
"TWO LINES THAT NEVER MEET MUST BE PARALLEL"
 80° 110° 65° 85° 135° 45° 20° 55° 80° 130° 70° 80° 45° 20° 125° 20° 115°
 50° 20° 20° 80° 50° 100° 55° 80° 95° 20° 160° 70° 115° 70° 85° 85° 20° 85°



ROTATION



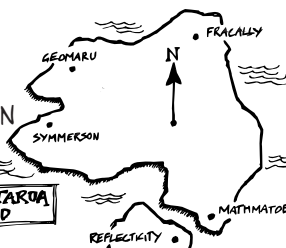
WHAT TEMPERATURE WOULD YOUR STOVE BE SET TO WITH THESE ROTATIONS?
 START AT 'OFF' EACH TIME
 90° CLOCKWISE LOW
 180° ANTICLOCKWISE MEDIUM
 270° CLOCKWISE HIGH
 360° CLOCKWISE OFF



HOW MANY DEGREES TO SET YOUR IRON FROM:
 OFF TO WOOL 180°
 OFF TO LINEN 60° CLOCKWISE
 COTTON TO SILK 120° CLOCKWISE
 NYLON TO LINEN 120° CLOCKWISE

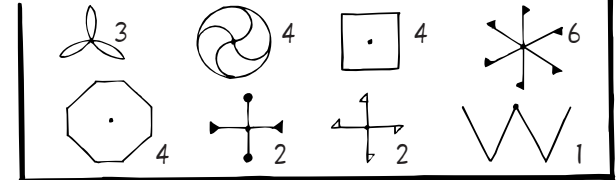
NAME THE TOWNS. THE ARROW IN THE MIDDLE OF PROTRACTARUA IS WHERE YOU SHOULD START MEASURING EACH TIME!

- 15° CLOCKWISE FRACALLY
- 180° CLOCKWISE REFLECTICITY
- 270° CLOCKWISE SYMMERSON
- 30° ANTICLOCKWISE GEOMARU
- 160° CLOCKWISE MATHMATOE
- 90° ANTICLOCKWISE SYMMERSON



ROTATIONAL SYMMETRY

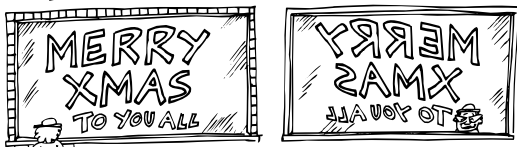
BESIDE EACH DIAGRAM WRITE THE ORDER OF SYMMETRY



ORDER OF SYMMETRY IS HOW MANY TIMES THE SHAPE CAN ROTATE ONTO ITSELF

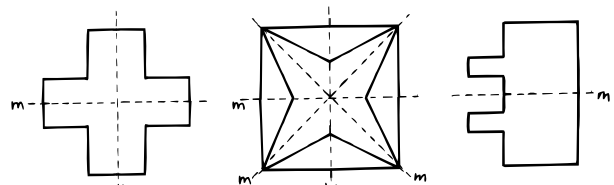
58 ↔ 59
 60 ↔ 61

REFLECTION - YOU'LL NEED A MIRROR FOR THIS PAGE!

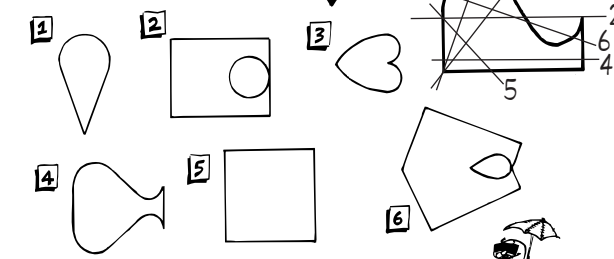


WHAT WOULD THE WINDOW LOOK LIKE FROM THE OTHER SIDE?

COMPLETE THE SHAPES



NOW USE A MIRROR ON THIS SHAPE TO MAKE THE SHAPES BELOW

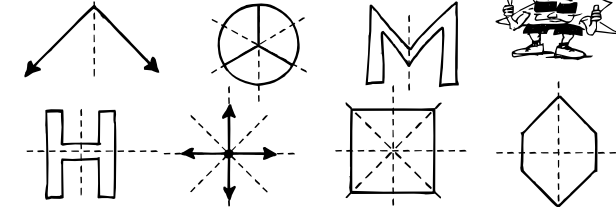


COMPLETE THE REFLECTION!

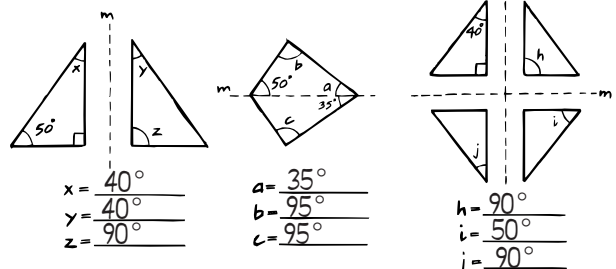
A WORM IS A SHAVED CATERPILLAR
 A WORM IS A SHAVED CATERPILLAR

SYMMETRY

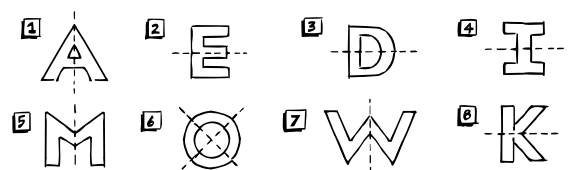
MARK IN THE LINES OF SYMMETRY!



CALCULATE THE MISSING ANGLES



COMPLETE THE FIGURES AROUND EACH LINE OF SYMMETRY TO ANSWER THE CODE!



"E S K I M O S ARE GODS
 2 8 4 5 6 1 2 6 3
 E R O Z E N FEW."
 6 2 2 7

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$17+19 = 36$ $20+5 = 25$
 $13+15 = 28$ $14 \times 9 = 126$
 $20-19 = 1$ $18+6 = 24$
 $47+9 = 56$ $27-15 = 12$
 $7+45 = 52$ $3 \times 30 = 90$
 $24 \times 5 = 120$ $39 \div 3 = 13$
 $8 \times 15 = 120$ $12+29 = 41$
 $42 \div 6 = 7$ $16 \times 2 = 32$
 $10 \times 30 = 300$ $46 \div 2 = 23$
 $28-17 = 11$ $250-50 = 200$

DARTS - FIND THE SCORES FOR EACH PERSON!

NAME	SCORES	TOTAL
HINE	5, 4, 20	29
MARY	9, 9, 9	27
JAMES	DOUBLE 6, 20, 20	52
MIKE	TRIPLE 12, 18, 4	58
ESTHER	DOUBLE 6, TRIPLE 4, 3	27
LYNDA	DOUBLE 17, 15, 10	59
CRAIG	8, 11, 14	33
TALA	19, DOUBLE 3, 6	31

WHO SCORED THE HIGHEST?
LYNDA

MAGIC

6	1	8	EACH ROW ADDS UP TO	15
7	5	3	EACH COLUMN ADDS UP TO	15
2	9	4	EACH DIAGONAL ADDS UP TO	15

NUMBER OF MISTAKES

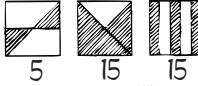
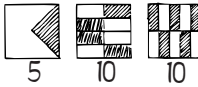
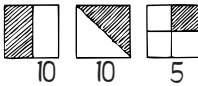


WORDY WHIMS

SUBTRACT 9 FROM 12 3
 SHARE \$30 BETWEEN 6 \$5
 WRITE TWO THOUSAND 2000
 24 SUBTRACT 15 9
 TOTAL OF 9, 4, AND 8 21
 4 FIVES 20
 8 MORE THAN 7 15
 DIFFERENCE BETWEEN 9 & 12 3
 HALF OF 60 30
 AT NOON IT'S 12 O'CLOCK

RELATIVE RELATIONS

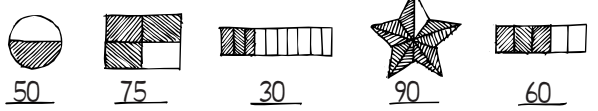
IF = 20, FIND THE VALUES OF...



PAWKY PERCENTAGE PAGE

$\frac{21}{100} = 21\%$ $\frac{37}{100} = 37\%$ $\frac{43}{100} = 43\%$ $\frac{59}{100} = 59\%$
 $\frac{94}{100} = 94\%$ $\frac{65}{100} = 65\%$ $\frac{36}{100} = 36\%$ $\frac{15}{100} = 15\%$
 $\frac{1}{10} = \frac{10}{100} = 10\%$ $\frac{9}{10} = \frac{90}{100} = 90\%$ $\frac{3}{25} = \frac{12}{100} = 12\%$
 $\frac{3}{20} = \frac{15}{100} = 15\%$ $\frac{9}{20} = \frac{45}{100} = 45\%$ $\frac{3}{50} = \frac{6}{100} = 6\%$

WHAT PERCENTAGE IS SHADED?



SHADE IN THE GIVEN PERCENT



PERCY PIG PERCENTAGE PUZZLES!

HOW DO YOU KNOW WHEN YOU'RE AT PERCY'S?
THE PLACE IS A PIGSITY
9 95 38 28 65 84 94 38 56 70 84 28 56 17 70 9 20

WHAT DOES THE VET GIVE PERCY FOR HIS SORES?
S O M E O I N K M E N T
70 74 55 38 74 56 52 80 55 38 52 9



$G \frac{12}{100} = 12\%$ $T \frac{9}{100} = 9\%$ $P \frac{28}{25} = 112\%$ $C \frac{94}{100} = 94\%$ $Y \frac{2}{10} = 20\%$
 $S \frac{7}{10} = 70\%$ $K \frac{8}{10} = 80\%$ $M \frac{11}{20} = 55\%$ $L \frac{13}{20} = 65\%$ $H \frac{19}{20} = 95\%$
 $N \frac{13}{25} = 52\%$ $A \frac{21}{25} = 84\%$ $E \frac{19}{50} = 38\%$ $I \frac{28}{50} = 56\%$ $O \frac{37}{50} = 74\%$

62 ↔ 63
64 ↔ 65



CRAZY CONVERSIONS



% → FRACTION

$19\% = \frac{19}{100}$ $20\% = \frac{20}{100} = \frac{1}{5}$
 $63\% = \frac{63}{100}$ $40\% = \frac{40}{100} = \frac{2}{5}$
 $81\% = \frac{81}{100}$ $50\% = \frac{50}{100} = \frac{1}{2}$
 $99\% = \frac{99}{100}$ $75\% = \frac{75}{100} = \frac{3}{4}$
 $7\% = \frac{7}{100}$ $85\% = \frac{85}{100} = \frac{17}{20}$

% → DECIMAL

$19\% = 0.19$ $60\% = 0.6$
 $28\% = 0.28$ $25\% = 0.25$
 $56\% = 0.56$ $8\% = 0.08$
 $94\% = 0.94$ $5\% = 0.05$
 $10\% = 0.1$ $150\% = 1.5$

IMPORTANT ELEPHANT INFORMATION!

TO UNCOVER SOME IMPORTANT FACTS ABOUT ELEPHANTS,
EACH LETTER BELOW NEEDS A CONVERSION

B = 30% **C** = 23% **K** = 8% **M** = 90% **R** = 35% **W** = 57% **H** = 16%
P = 41% **Z** = 14% **I** = 500% **G** = 28% **O** = 33 1/3% **S** = 31% **E** = 50%
L = 11% **A** = 60% **Q** = 40% **N** = 12 1/2% **T** = 200% **V** = 66 2/3% **F** = 74%

WHAT DO YOU GIVE TO SICK ELEPHANTS?

TRUNKQUILLIZERS
 $\frac{2}{20}$ $\frac{3}{25}$ $\frac{1}{10}$ $\frac{2}{25}$ $\frac{4}{25}$ $\frac{3}{25}$ $\frac{5}{100}$ $\frac{11}{100}$ $\frac{5}{14}$ $\frac{1}{5}$ $\frac{3}{20}$ $\frac{1}{31}$

HOW DO YOU MAKE AN ELEPHANT FLY?

START WITH A TWO METRE ZIP
 $\frac{3}{21}$ $\frac{2}{20}$ $\frac{2}{20}$ $\frac{2}{27}$ $\frac{5}{2}$ $\frac{2}{25}$ $\frac{3}{2}$ $\frac{2}{27}$ $\frac{1}{3}$ $\frac{10}{10}$ $\frac{5}{2}$ $\frac{2}{20}$ $\frac{5}{14}$ $\frac{5}{100}$

WHY DID THE LADY ELEPHANT STOP TAP DANCING?

SHE FELL INTO THE SINK
 $\frac{3}{27}$ $\frac{5}{27}$ $\frac{2}{30}$ $\frac{5}{100}$ $\frac{11}{100}$ $\frac{5}{1}$ $\frac{1}{8}$ $\frac{2}{3}$ $\frac{2}{27}$ $\frac{5}{31}$ $\frac{1}{5}$ $\frac{2}{25}$

WHAT DO YOU GET IF YOU CROSS A KANGAROO & ELEPHANT?

BIG HOLES ACROSS AUSTRALIA
 $\frac{3}{5}$ $\frac{2}{25}$ $\frac{2}{25}$ $\frac{3}{100}$ $\frac{5}{31}$ $\frac{2}{25}$ $\frac{23}{20}$ $\frac{1}{3}$ $\frac{3}{31}$ $\frac{3}{25}$ $\frac{2}{25}$ $\frac{3}{31}$ $\frac{2}{20}$ $\frac{3}{100}$ $\frac{5}{20}$

GIVING 100 PERCENT!

... ALL DAY TIME!

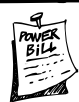
$\frac{3}{10} = 30\%$ $\frac{13}{100} = 13\%$ $\frac{1}{50} = 2\%$ $\frac{11}{50} = 22\%$
 $\frac{1}{20} = 5\%$ $\frac{9}{20} = 45\%$ $\frac{1}{25} = 4\%$ $\frac{9}{25} = 36\%$
 $16\% = 0.16$ $35\% = 0.35$ $42\% = 0.42$ $81\% = 0.81$
 $6\% = 0.06$ $5\% = 0.05$ $2\% = 0.02$ $1\% = 0.01$

PROFIT IS

COST PRICE	\$4	\$9	\$15	\$60	\$80
% PROFIT	50%	50%	100%	25%	10%
REAL PROFIT	\$2	\$4.50	\$15	\$15	\$8
SELL PRICE	\$6	\$13.50	\$30	\$75	\$88

PERCENTAGE PUZZLES

SHOP PRICE = \$75
 DISCOUNT = 20% of \$75
 = 0.2×75
 = \$15
 SALE PRICE = \$60



534 UNITS USED.
 COST PER UNIT
 IS 6 CENTS
 ELECTRIC ACCOUNT = \$32.04
 + 12.5% G.S.T. = \$4.00
 FINAL BILL = \$36.04

- PUZZLE TIME!

COST PRICE	50c	40c	100c	200c
% LOSS	50	25	45	30
REAL LOSS	25c	10c	45c	60c

S $\frac{57}{100}$ **I** 40% **E** 28% **B** $\frac{18}{100}$
J 1% **R** 23% **A** 100% **T** 10%

ALWAYS GIVE 100%

N $\frac{25}{45}$ **O** $\frac{1}{1}$ **L** $\frac{60}{25}$ **I** $\frac{50}{25}$ **K** $\frac{7}{25}$
B $\frac{36}{1}$ **A** $\frac{23}{1}$ **R** $\frac{1}{1}$ **I** $\frac{57}{1}$

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 8 + 3 &= 11 \\ 8 - 3 &= 5 \\ 4 \times 7 &= 28 \\ 12 \div 4 &= 3 \\ 7 + 9 &= 16 \\ 11 - 5 &= 6 \\ 6 \times 6 &= 36 \\ 9 \div 1 &= 9 \\ 7 - 0 &= 7 \\ 4 - 4 &= 0 \end{aligned}$$

RADICAL ROMANS

$$\begin{aligned} II &= 2 \\ IV &= 4 \\ VI &= 6 \\ IX &= 9 \\ XV &= 15 \\ V &= 5 \\ X &= 10 \\ XIII &= 13 \\ XXI &= 21 \\ XXV &= 25 \end{aligned}$$

8

DANDY DECIMALS

$$\begin{aligned} 0.5 + 0.2 &= 0.7 \\ 0.4 + 0.4 &= 0.8 \\ 0.5 - 0.2 &= 0.3 \\ 0.4 - 0.4 &= 0 \\ 1.3 + 0.6 &= 1.9 \\ 1.9 - 0.6 &= 1.3 \\ 4 \times 0.1 &= 0.4 \\ 5 \times 0.3 &= 1.5 \\ 0.6 - 0.2 &= 0.4 \\ 1.2 - 0.3 &= 0.9 \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 321 + 200 &= 521 \\ 400 + 400 &= 800 \\ 300 - 165 &= 135 \\ 400 - 120 &= 280 \\ 60 \times 5 &= 300 \\ 38 \times 10 &= 380 \\ 70 \div 7 &= 10 \\ 1500 \div 10 &= 150 \\ 444 + 555 &= 999 \\ 651 - 156 &= 495 \end{aligned}$$

THE QUINTUS QUIZ

I LEFT HOME AT 8:30 AM
IT TOOK 30 MINUTES TO
GET TO SCHOOL. SCHOOL WENT
FOR 7 HOURS. SUPPER
WAS AT 8:45 PM. TODAY, I WAS
OUT OF BED FOR 16 HOURS.

- TUESDAY -
OUT OF BED 7:00 AM.
LEFT HOME 8:30
GO TO SCHOOL 9:00
SCHOOL FINISHED 4:00
ARRIVED HOME 4:20
SUPPER TIME 8:45
INTO MY BED 11:00

NUMBER OF MISTAKES _____

QUOTE-A-BILL QUANTITIES

A DISCOUNT IS MONEY SUBTRACTED FROM THE PRICE



SHOP PRICE = \$60
DISCOUNT = 10% of \$60
 $= \frac{10}{100} \times 60$
 $= \$6$
SALE PRICE = \$54



SHOP PRICE = \$42
DISCOUNT = 50% of \$42
 $= \frac{50}{100} \times 42$
 $= \$21$
SALE PRICE = \$21

DO THE CALCULATIONS TO COMPLETE THIS TABLE!

ORIGINAL PRICE	BIKE \$250	HAT \$12	BOOK \$40	TAPE \$10	HOLIDAY \$600	SOCKS \$5
% DISCOUNT	20%	25%	10%	30%	5%	40%
AMOUNT OF DISCOUNT	\$50	\$3	\$4	\$3	\$40	\$2
SALE PRICE	\$200	\$9	\$36	\$7	\$760	\$3

G.S.T. IS A TAX ADDED TO THE PRICE (IN NZ IT IS 12.5%)

PHONE RENTAL = \$30
TOLL ACCOUNT = \$18
TOTAL = 48
+ 12.5% G.S.T. = \$6
FINAL BILL = \$54

GAS ACCOUNT = \$13
SERVICE FEE = \$7
TOTAL = 20
+ 12.5% G.S.T. = \$2.50
FINAL BILL = \$22.50

COMPLETE THE TABLE TO UNCOVER A SAD QUOTE!

ACCOUNT	16L	56L	\$24	80L	\$32	72L	\$40	\$88
+12.5% G.S.T.	2S	7A	3V	10L	4K	9B	5M	11G
TOTAL BILL	18L	63L	\$27	90L	\$36	81L	\$45	\$99

"OVER INFLATION MAKES ONE GO BUSY!"
8133627 63991810745638199 574362 819936 1181 990245

66 ↔ 67
68 ↔ 69

- MORE ON PERCENT -

LANA GOT 40 MARKS OUT OF 80. SHE SCORED 50 %
GANA GOT 37 MARKS OUT OF 50. SHE SCORED 74 %
SITU GOT 19 MARKS OUT OF 25. SHE SCORED 76 %
FITU GOT 8 MARKS OUT OF 10. SHE SCORED 80 %

WHOSE RESULT WAS THE BEST? FITU

ANNA KEPT A RECORD OF HER EARNINGS AND SAVINGS FOR THE 5 WEEKS SHE WORKED.

COMPLETE HER TABLE!

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
EARNINGS	\$100	\$90	\$120	\$80	\$150
SAVINGS	\$48	\$45	\$66	\$32	\$60
% SAVED	48	50	55	40	40

NOW LINE UP EACH SUM WITH ITS CORRECT ANSWER TO COMPLETE THE SENTENCE!

WHAT % IS 30 OF 60 → 50
WHAT % IS 8 OF 20 → 40
WHAT % IS 5 OF 25 → 20
WHAT % IS 9 OF 90 → 10
WHAT % IS 14 OF 280 → 5
WHAT % IS 2 OF 16 → 12.5
WHAT % IS 12 OF 48 → 25
WHAT % IS 3 OF 120 → 2.5
WHAT % IS 21 OF 70 → 30
WHAT % IS 24 OF 40 → 60
FIND 10% OF 950 → 95
FIND 20% OF 500 → 100
FIND 25% OF 300 → 75
FIND 40% OF 180 → 72
FIND 50% OF 164 → 82
FIND 60% OF 150 → 90
FIND 75% OF 108 → 81
FIND 100% OF 35 → 35

THE SAW-DOCTOR'S JOURNEY INTO AFRICA WAS TO...

... BRINGING BACK DINOSAURS

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 3 + 2 &= 5 \\ 10 - 5 &= 5 \\ 4 \times 1 &= 4 \\ 9 \div 3 &= 3 \\ 6 + 4 &= 10 \\ 8 - 7 &= 1 \\ 5 \times 5 &= 25 \\ 6 \div 2 &= 3 \\ 7 - 4 &= 3 \\ 9 - 3 &= 6 \end{aligned}$$



MONEY MIXTURES

$$\begin{aligned} 10c + 20c &= 30c \\ 20c + 50c &= 70c \\ 55c - 15c &= 40c \\ 20c - 20c &= 0 \\ 4 \times 20c &= 80c \\ 5 \times 50c &= \$2.50 \\ \$3 + \$7 &= \$10 \\ \$7 - \$3 &= \$4 \\ \$7 \times 8 &= \$56 \\ \$20 \div 4 &= \$5 \end{aligned}$$

VISCOUS VARIABLES

$$\begin{aligned} k + k &= 2k \\ l - l &= 0 \\ 3m + m &= 4m \\ 5n + 2n &= 7n \\ 4p + 3p &= 7p \\ 3q - q &= 2q \\ 5r - 2r &= 3r \\ 2s + 2s &= 4s \\ t + t + t &= 3t \\ 3u - 3u &= 0 \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 200 + 145 &= 345 \\ 300 + 400 &= 700 \\ 200 - 110 &= 90 \\ 100 - 63 &= 37 \\ 60 \times 2 &= 120 \\ 70 \times 3 &= 210 \\ 40 \div 4 &= 10 \\ 50 \div 10 &= 5 \\ 222 + 222 &= 444 \\ 435 - 135 &= 300 \end{aligned}$$

THE QUINTUS QUIZ

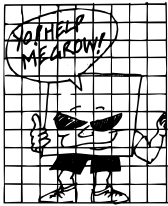
- HOW MANY DAYS IN MAY? 31 days
- WHAT DAY IS APRIL 23rd? Tuesday
- WHAT DATE IS THE FIRST WEDNESDAY OF MAY? 1st
- WHAT DATE IS THE THIRD SUNDAY OF APRIL? 21st
- HOW MANY TUESDAYS IN APRIL? 5

APRIL						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

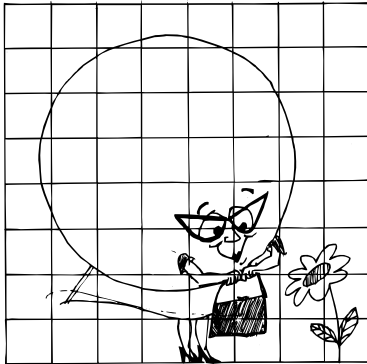
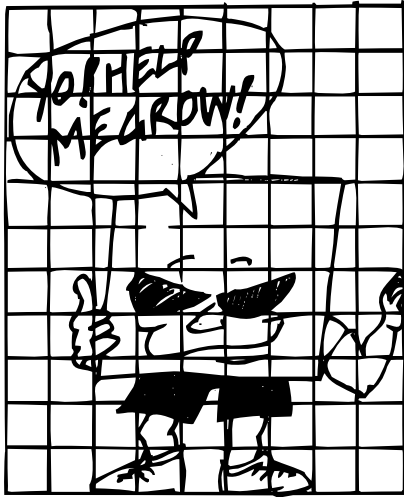
MAY						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NUMBER OF MISTAKES _____

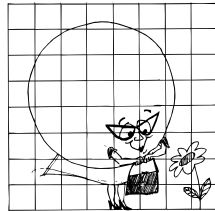
ENLARGEMENT



USE THE GRID TO ENLARGE STANLEY SQUARE!

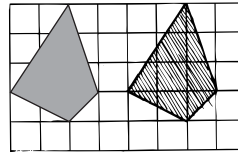


NOW USE THE GRID TO MAKE SUZY SMALLER!

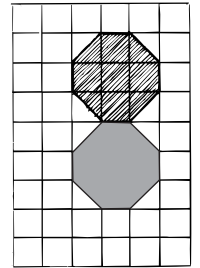


TRANSLATIONS

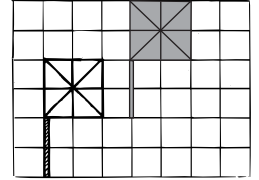
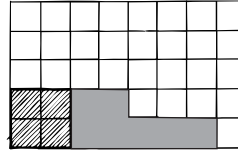
TRANSLATE 4 UNITS TO THE LEFT.



TRANSLATE 3 UNITS DOWN.



TRANSLATE 2 UNITS TO THE RIGHT.



TRANSLATE 2 UNITS UP & 3 UNITS RIGHT.

PROPERTIES

FILL IN ALL THE GAPS!

TRANSLATION	HOW DO WE DO IT?	DOES THE SIZE CHANGE?	DOES THE SHAPE CHANGE?	DO ALL POINTS MOVE?
REFLECTION	Points transform the same distance but opposite	No.	No.	No.
ROTATION	Points turn an angle about a centre in a given direction.	No.	No.	No.
TRANSLATION	Points shift by a given vector	No.	No.	Yes
ENLARGEMENT	Points transform K times from the centre, O.	Yes	No.	No.

70 ← → 71
72 ← → 73

PATTERNS USING TRANSFORMERS - FILL IN EACH GRID!

TRANSLATE	ROTATE 90°	REFLECT
TRANSLATE	ROTATE 90°	REFLECT
TRANSLATE	ROTATE 90°	REFLECT
TRANSLATE	ROTATE 90°	REFLECT

TIME TO TRANSFORM!

1. DRAW THE REFLECTIONS OF THESE SHAPES.

2. ROTATE THE SHAPE CLOCKWISE 90° ABOUT A.

3. ROTATE THE SHAPE 180° ABOUT B.

4. TRANSFORM 4 UNITS TO THE LEFT.

5. ENLARGE THE SHAPE SO IT IS 2 TIMES BIGGER.

6. ENLARGE THE SHAPE SO IT IS 3 TIMES BIGGER.

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 5 + 3 &= 8 \\ 10 - 4 &= 6 \\ 6 \times 8 &= 48 \\ 4 \div 4 &= 1 \\ 7 + 2 &= 9 \\ 8 - 3 &= 5 \\ 5 \times 5 &= 25 \\ 6 \div 3 &= 2 \\ 9 - 7 &= 2 \\ 5 - 1 &= 4 \end{aligned}$$

TRENDY TABLES

$$\begin{aligned} 4 \times 1 &= 4 \\ 4 \times 2 &= 8 \\ 4 \times 3 &= 12 \\ 4 \times 4 &= 16 \\ 4 \times 5 &= 20 \\ 4 \times 8 &= 32 \\ 4 \times 9 &= 36 \\ 4 \times 10 &= 40 \\ 4 \times 12 &= 48 \\ 4 \times 15 &= 60 \end{aligned}$$



SOFT SUBSTITUTES

$$\begin{aligned} k = 7, k + 3 &= 10 \\ l = 8, l + 11 &= 19 \\ m = 4, m - 2 &= 2 \\ n = 9, n - 5 &= 4 \\ p = 2, 8 + p &= 10 \\ r = 3, 7 - r &= 4 \\ s = 5, 8s &= 40 \\ t = 6, 3t &= 18 \\ u = 1, 5u &= 5 \\ v = 10, 6v &= 60 \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 32 \text{ ADDED TO } 9 \text{ IS } 41 \\ 13 \text{ TIMES } 5 \text{ IS } 65 \\ \$5.40 + \$2.55 &= \$7.95 \\ \$8.65 + \$9.70 &= \$18.35 \\ 829 &= 800 + 20 + 9 \\ 700 + 40 + 3 &= 743 \\ 230 + 142 &= 372 \\ 175 + 251 &= 426 \\ 250 - 140 &= 110 \\ 177 - 33 &= 144 \end{aligned}$$

THE QUINTUS QUIZ

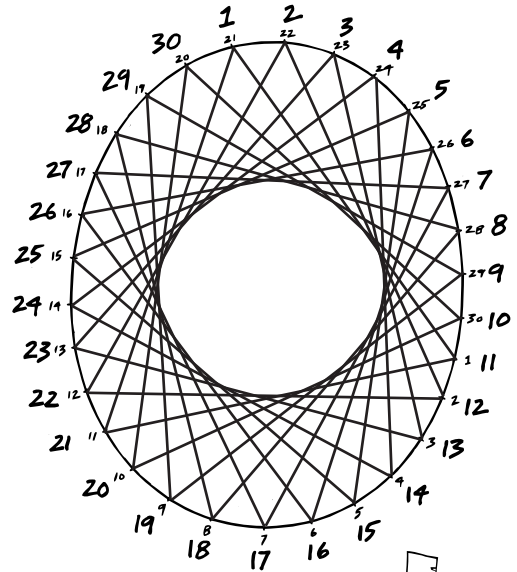
-FIND THE COST FOR...

- 2 PARENTS ONLY \$4
- 3 PARENTS & 1 STUDENT \$6
- 1 PARENT & 1 VISITOR \$6
- 1 PARENT & 3 STUDENTS \$2
- 2 PARENTS & 2 VISITORS \$12



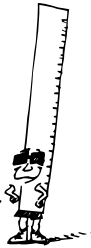
NUMBER OF MISTAKES _____

'EYE IN THE SKY!'



JOIN THE BIG NUMBERS TO THE SAME LITTLE NUMBERS TO COMPLETE THE DESIGN!

YOU'LL NEED ROONEY RULER TO HELP YOU!



74 ↔ 75
76 ↔ 77

PUTA +, -, X OR ÷ SIGN IN EACH □ TO MAKE THE EQUATIONS CORRECT!

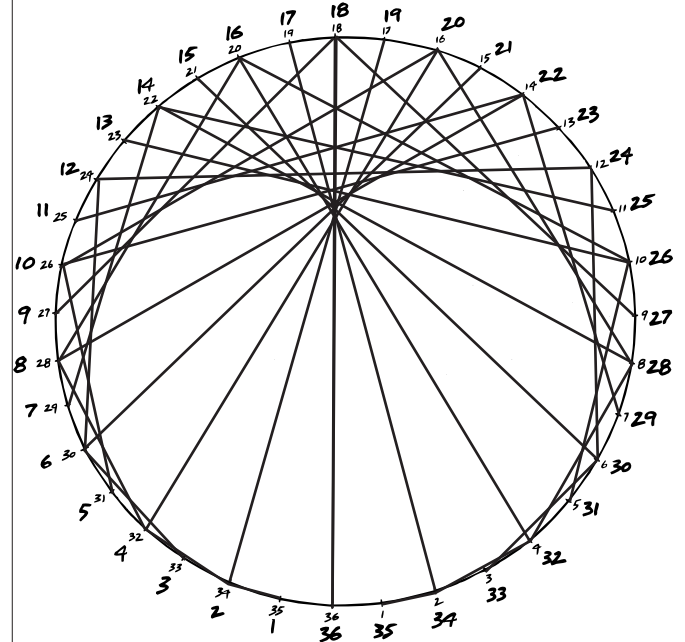
$$\begin{aligned} 5 + (3 + 5) &= 13 & 9 - 9 &= 8 - 8 & 6 \div 2 \times 3 &= 9 \\ 10 \div (2 \times 5) &= 1 & 16 + 8 &= 8 \times 3 & 15 \times 6 \div 3 &= 30 \\ 36 + (4 \times 3) &= 48 & 8 \div 8 &= 9 \div 9 & 6 \times 4 - 3 &= 21 \\ 9 - (12 - 6) &= 3 & 36 \div 4 &= 7 + 2 & 9 + 8 - 7 &= 10 \\ 12 \times (8 \div 2) &= 48 & 3 \times 10 &= 6 \times 5 & 3 \times 4 \times 2 &= 24 \end{aligned}$$

CROSS NUMBER PUZZLE

7	60 ÷ 10 = 6	+ 66 - 0 = 72 ÷ 8 = 9	47
+	÷ ÷ ÷ ×	- ÷	x ÷ ÷ -
1	15 ÷ 5 = 3	63 ÷ 7 = 9	6 ÷ 3 = 2
=	= = =	= × =	= = =
8 ÷ 4 = 2	18 ÷ 3 = 6	8	48 - 3 = 45
48 ÷ 8 = 6	x =	=	- ÷
÷ x	=	=	=
4 × 7 = 28 - 1 = 27 + 5 = 32	40 - 35 = 5		
=	=	- ÷	÷ ÷ +
12	56 - 2 = 54	17	96 ÷ 8 = 12 + 7 = 19
+	÷ =	=	=
25	24	90 ÷ 9 = 10 + 50 + 4 = 64	5
=	÷	=	÷
37 + 6 = 43	6 + 29 = 35	56 ÷ 8 = 7 = 7	
=	-	÷	= + =
4 + 18 = 22	49 ÷ 7 = 7	8 + 9 = 17	
=	=	=	=
25 - 12 - 8 = 5	8 × 2 = 16		



TIME TO 'DOUBLE-UP!'



START AT 1 WITH THE LITTLE NUMBERS, AND JOIN EACH NUMBER TO ITS DOUBLE, eg JOIN 1 WITH 2, 2 WITH 4, 3 WITH 6 etc. NOW REPEAT WITH THE BIG NUMBERS. COLOUR YOUR DESIGN. IT IS CALLED A CARDIOID!

THE COMPUTATION CHALLENGE.

\$250 TO INVEST. HOW MUCH DO YOU WIN?

"THEY'RE OFF"

START WITH \$250

EVERY HURDLE MUST BE MASTERED

FINISH MY FINAL ANSWER IS: \$1000

TRY THIS COMPUTATION RACE FOR THE CHAMPION COMPUTATOR CUP.

BE CAREFUL, IF YOU FINISH WITH THE WRONG ANSWER YOU ARE DISQUALIFIED, AND ALL YOUR MONEY GOES TO THE CLUB!

MATHS COMPUTATOR CHAMPIONS

1500

MULTIPLY BY 6

1600

ADD 100 TO ANSWER

400

DIVIDE ANSWER BY 4

180

SUBTRACT 220 FROM ANSWER

2160

MULTIPLY ANSWER BY 12

2520

ADD 360 TO ANSWER

1500

FIND TWO THIRDS OF THE ANSWER

1800

MULTIPLY ANSWER BY 15

120

DIVIDE ANSWER BY 21

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 9 + 5 &= 14 \\ 9 - 5 &= 4 \\ 8 \times 9 &= 72 \\ 10 \div 2 &= 5 \\ 7 + 6 &= 13 \\ 8 - 8 &= 0 \\ 7 \times 6 &= 42 \\ 3 \div 3 &= 1 \\ 10 - 7 &= 3 \\ 10 - 0 &= 10 \end{aligned}$$

FANTASTIC FRACTIONS

$$\begin{aligned} \frac{1}{2} \text{ of } 4 &= 2 \\ \frac{1}{2} \text{ of } 8 &= 4 \\ \frac{1}{2} \text{ of } 16 &= 8 \\ \frac{1}{2} \text{ of } 30 &= 15 \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \\ \frac{1}{3} \times \frac{1}{3} &= \frac{1}{9} \end{aligned}$$

MIGHTY METRICS

$$\begin{aligned} 40\text{m} + 80\text{m} &= 120\text{m} \\ 37\text{cm} + 17\text{cm} &= 54\text{cm} \\ 52\text{m} - 32\text{m} &= 20\text{m} \\ 61\text{mm} - 45\text{mm} &= 16\text{mm} \\ 100\text{cl} &= 1\text{l} \\ 300\text{cl} &= 3\text{l} \\ 1000\text{mg} &= 1\text{g} \\ 2000\text{mg} &= 2\text{g} \\ 5678\text{m} &= 5.678\text{km} \\ 8567\text{m} &= 8.567\text{km} \end{aligned}$$

EXTRA EXAMPLES

14 DAYS IN 1 FORTNIGHT

300 sec = 5 MINUTES

0.9 + 0.9 = 1.8

1.3 - 0.7 = 0.6

0.3 x 9 = 2.7

0.9 ÷ 3 = 0.3

16, 8, 4, 2, 1

407 + 704 = 1111

862 - 145 = 717

3² = 9

THE QUINTUS QUIZ

- FIND THE COST OF...
- 9 PENCILS \$1.50
 - 4 FELT TIPS \$8
 - 6 BIROS \$3
 - 9 PENCILS & 1 RULER \$2.25
 - 4 FELT TIPS, 6 BIROS, & 1 RULER \$11.75

SCHOOL SHOP

- 3 PENCILS for 50c
- FELT TIPS \$2
- BIROS 2 for \$1
- 15cm RULER 75c

NUMBER OF MISTAKES _____

78 ↔ 79
80 ↔ 82

- KNOW MY METRICS -

CHOOSE AN ANSWER FROM THE BOTTOM OF THE PAGE FOR EACH OF THE MEASUREMENTS!

HOW MANY MATCHES IN THE BOX? 50

HOW MUCH VANILLA ESSENCE IN THE BOTTLE? 28ml

HOW HEAVY? 2 tonne

HOW MUCH PETROL IN THE CAN? 5L

HOW TALL IS A PRESCHOOLER? 1m

HOW POWERFUL? 75W

WHAT PRESSURE IN A TRUCK TYRE? 300 kPa

WHAT MASS? 760g

HOW HEAVY? 72kg

HOW MUCH FOOD ENERGY? 8000 kJ

HOW HIGH? 4500m

HOW LONG IS A FINGER? 60mm

HOW MANY SECONDS IN AN HOUR? 3600 sec

HOW FAR HAS THE BALL TRAVELLED? 19m

WHAT IS TODAY'S TEMPERATURE? 18°C

HOW MUCH ICE-CREAM? 2L

HOW FAR TO THE HOLIDAY PARK? 68km

WHAT POWER? 1500W

ANSWERS

1ml 4500m 21kg 2l 30cm 18°C 30L 51J

760g 8000 sec 1500W 8000 kJ 28ml 68km

50 1m 5L 200m 3600 sec 1km 72kg 60mm

111°C 2 tonne 75W 300 kPa 19m 40L 11

TIMING THE T.V.

24 HOUR CLOCK	TIME	T.V. ONE
	10:00	THE MUPPET SHOW
	10:25	ROYAL HERITAGE
	11:40	A BIG COUNTRY
	12:00	ENGLISH SOCCER
	1:00	NEWS REVIEW
	1:30	EATING EARTH
	1:45	WALT DISNEY
	1:45	SUNDAY GRANDSTAND
	1:50	COUNTRY CALENDAR
	1:50	NETWORK NEWS
	1:50	FRONTLINE
	1:50	MAGGIVER
	1:50	MASTERPIECE THEATRE
	1:50	NETWORK NEWS
	1:50	KOHA
	1:50	L.V.
	1:50	SUNDAY HORRORS
	2:00	(CLOSEDOWN AT MIDNIGHT)

MY FAVOURITE PROGRAMME IS _____

AND IT IS ON FOR _____ min

HOW LONG IS:

1 WALT DISNEY 60 min

2 A BIG COUNTRY 20 min

3 SUNDAY HORRORS 90 min

WHICH PROGRAMME IS THE SHORTEST? KOHA

TWO PROGRAMMES ARE ON FOR 25 minutes. THEY ARE The Muppet Show & Country Calendar

HOW MANY TIMES IS NEWS ON T.V. ONE? 3 times

HOW MUCH TIME IS GIVEN TO THE NEWS? 55 min

NOW FILL IN THE MISSING TIMES IN THE CHART BELOW!

24 HOUR TIMES	12 HOUR TIMES	TIME IN WORDS
0820	8.20 am	TWENTY PAST EIGHT IN THE MORNING
1325	1.25 pm	TWENTY-FIVE PAST ONE IN THE AFTERNOON
1100	11:00 am	ELEVEN O'CLOCK IN THE MORNING
1015	10.15 am	TEN FIFTEEN IN THE MORNING
1630	4.30 pm	FOUR THIRTY IN THE AFTERNOON
1805	6.05 pm	FIVE PAST SIX IN THE EVENING
2220	10.20 pm	TWENTY PAST TEN AT NIGHT
1450	2.50 pm	TEN TO THREE IN THE AFTERNOON

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{array}{l}
 16-5 = 11 \\
 13+15 = 28 \\
 27-14 = 8 \\
 58+7 = 65 \\
 3 \times 35 = 105 \\
 4 \times 23 = 92 \\
 84-6 = 78 \\
 84 \div 3 = 28 \\
 36 \div 12 = 3 \\
 3 \times 90 = 270
 \end{array}
 \quad
 \begin{array}{l}
 28 \times 3 = 84 \\
 22 \times 5 = 110 \\
 19-18 = 1 \\
 66 \div 6 = 11 \\
 40 \times 5 = 200 \\
 120-90 = 30 \\
 56+82 = 138 \\
 22+88 = 110 \\
 90 \div 5 = 18 \\
 27 \div 9 = 3
 \end{array}$$

TELLING TABLES

$$\begin{array}{l}
 3 \times 2 = 6 \\
 3 \times 4 = 12 \\
 3 \times 7 = 21 \\
 3 \times 13 = 39 \\
 3 \times 10 = 30 \\
 3 \times 6 = 18 \\
 3 \times 9 = 27 \\
 3 \times 12 = 36 \\
 3 \times 3 = 9 \\
 3 \times 8 = 24
 \end{array}$$



EXTRA EXAMPLES

$$\begin{array}{l}
 4 + 8 = 15 - 3 \\
 12 \times 2 = 18 + 6 \\
 66 \div 6 = 20 - 9 \\
 100 \div 5 = 4 \times 5 \\
 36 + 2 = 19 \times 2 \\
 3 \times 5 = 30 \div 2 \\
 5 \times 15 = 75 \\
 23 - 5 = 18
 \end{array}
 \quad
 \begin{array}{l}
 3 \times 2 = 42 \div 7 \\
 4 + 23 = 3 \times 9 \\
 36 - 6 = 3 \times 10 \\
 15 \div 5 = 3 \times 1 \\
 6 \times 8 = 48 \\
 2 \times 50 = 100 \\
 42 + 47 = 89 \\
 31 - 17 = 14
 \end{array}$$

MORE MAGIC

2	9	4
7	5	3
6	1	8

TOTAL = 15

16	2	12
6	10	14
8	18	4

TOTAL = 30

15	8	13
10	12	14
11	16	9

TOTAL = 36

NUMBER OF MISTAKES _____

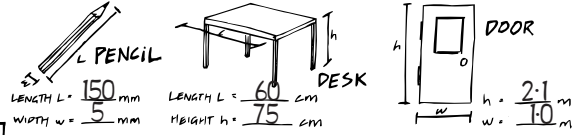
MEASURING LENGTHS

TODAY WE NEED A RULER AND A PIECE OF STRING

ALL THE SYMBOLS FILL IN THE MISSING WORDS AND NUMBERS!

mm represents millimetre
 cm represents centimetre $\frac{10}{100}$ mm = 1 centimetre
 m represents metre $\frac{100}{1000}$ cm = 1 metre
 km represents kilometre $\frac{1000}{1000}$ m = 1 kilometre

TRY MEASURING THESE OBJECTS AROUND YOU!



HOW DO I MEASURE UP? Note: example measures only

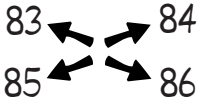
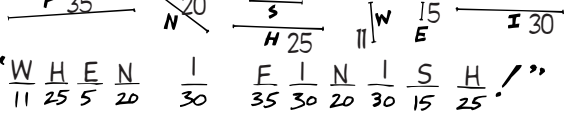
MY PERSONAL MEASUREMENT CHART

DATE _____ MY NECK IS _____
 TODAY MY HEIGHT IS _____ MY WAIST IS _____
 MY SPAN IS _____ MY ARM IS _____
 MY CHEST IS _____ MY FOOT IS _____

STRETCH MY IMAGINATION!

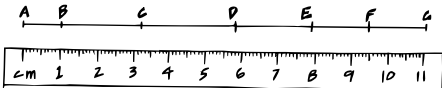
LENGTH OF THE SCHOOL FENCE _____
 LENGTH OF THE MAIN SCHOOL BUILDING _____
 LENGTH OF THE PLAYING FIELD _____
 LENGTH OF OUR SCHOOL ROAD _____
 LENGTH OF NEW ZEALAND _____

HOW LONG UNTIL I GO HOME? MEASURE THESE LINES IN MILLIMETRES TO FIND OUT!



HOW DO YOU MEASURE UP? ...VERY WELL THANK YOU!

MEASURE THE LINE SEGMENTS IN mm. WRITE THE LETTER ABOVE THE CORRECT ANSWER IN THE PUZZLES TO REVEAL THE AUTHORS OF THE BATTY BOOKS! HAVE FUN



- G = LENGTH OF AB = 10 mm
- N = LENGTH OF CD = 26 mm
- U = LENGTH OF BD = 48 mm
- A = LENGTH OF CE = 47 mm
- S = LENGTH OF EF = 16 mm
- M = LENGTH OF CG = 78 mm
- Y = LENGTH OF DF = 37 mm
- F = LENGTH OF AD = 59 mm
- E = LENGTH OF DE = 21 mm
- L = LENGTH OF BE = 69 mm
- R = LENGTH OF CF = 63 mm
- O = LENGTH OF BG = 100 mm
- P = LENGTH OF AG = 110 mm
- D = LENGTH OF BF = 85 mm
- I = LENGTH OF DG = 52 mm

BATTY BOOK TITLES

APOLOGIZING MADE EASY

BY S A Y E R S O R R Y
 16 47 37 21 63 16 100 63 63 37

RICE CROPS OF THE WORLD

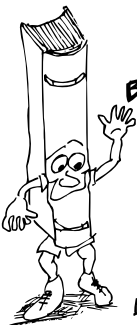
BY P A D D Y F I E L D S
 110 47 85 85 37 59 52 21 69 85 16

ARITHMETIC

BY A D A M U P P E
 47 85 47 78 48 110 110 21

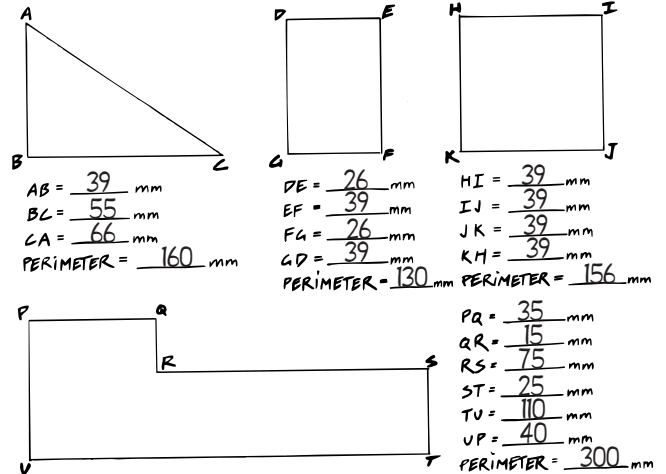
ONE, TWO, THREE, WALTZ

BY J . M . D A N - S I N G
 52 78 85 47 26 16 52 26 10

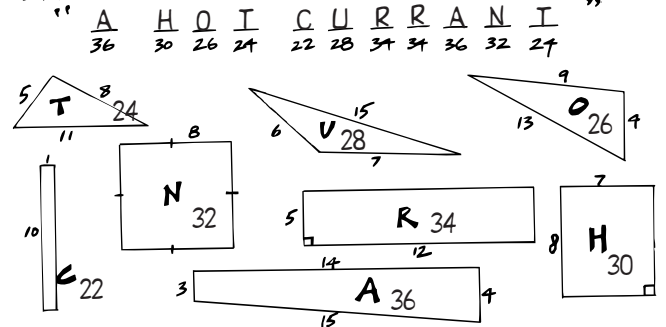


MEET MR. PERRY MITA!

THE DISTANCE AROUND A SHAPE IS CALLED ITS PERIMETER. MEASURE THE SIDES AND FIND THE PERIMETER OF EACH SHAPE.



WHAT DO WE GET WHEN WE MIX A PEPPER AND A GRAPE? CALCULATE THESE PERIMETERS TO FIND THE ANSWER!



THE FORMULA FOR THE AREA OF A RECTANGLE IS:

Length multiplied by width

CALCULATE THE AREAS OF THE RECTANGLES BELOW TO DECODE THE ANSWER TO THE CHILLING QUESTION!

WHICH FIRM SUPPLIED FREEZERS TO THE JAIL?

"I C U B R G L A R S L I M I T E D!"
 84 36 74 60 74 40 30 96 18 40 48 96 84 16 84 45 77 64

A HISTORICAL MYTH!

THE FORMULA FOR THE AREA OF A TRIANGLE IS...

One half the length of the base multiplied by the height

CALCULATE THE AREAS FOR THESE TRIANGLES AND FIND YOUR ANSWER IN THE RECTANGLE BELOW. (THE CORRECT ANSWERS GO ACROSS FROM LEFT TO RIGHT.)

COLOUR IN EACH CORRECT ANSWER. THE 24 LETTERS LEFT TELL THE MYTH!

P			Y			T	H			A
5			9			7	3			7
G	0					R		A	S	G
2	9					0		1	6	
L	0			V	E	D			T	R
8	5			1	4	3			2	
	I	A	N			G	L	E		S
	6	5	4			7	2	1		3

"Pythagoras loved triangles"

87 ↔ 88
 89 ↔ 91

WHIZZ-KIDS WORKSHEET 13

NIFTY NUMBERS

4+13 = 17 5x6 = 30
 20+90 = 110 90x3 = 270
 35-7 = 28 15÷1 = 15
 87-22 = 65 900÷30 = 30
 105-10 = 95 8x6 = 48
 3x26 = 78 15x9 = 135
 4÷1 = 4 27x3 = 81
 258÷3 = 86 45+57 = 102
 85+10 = 95 27+27 = 54
 400÷20 = 20 104÷2 = 52

EASY EXPRESSIONS

5c + 4c = 9c
 2a + 6a = 8a
 9k + 4k + 2k = 15k
 4m + 2m = 6m
 9p - 5p = 4p
 4x + 2x - 6x = 0
 3a + 4a = 7a
 6c - 2c = 4c
 9l - 3l = 6l
 20f + 5f = 25f

MORE MAGIC

- FILL IN THE SQUARES SO ALL ROWS, COLUMNS AND DIAGONALS ADD UP TO THE TOTAL!

4	11	6
9	7	5
8	3	10

TOTAL = 21

5	12	7
10	8	6
9	4	11

TOTAL = 24

12	14	4
2	10	18
16	6	8

TOTAL = 30

DAY AT THE FAIR

LOLLY POP 50c DRINK 70c CAKE 45c HOT DOG \$1.50 DOUGHNUT \$1

PERSON	HAD	BOUGHT	SPENT	HAD LEFT
RODNEY	\$5	2 HOT DOGS	\$3	\$2
EPI	\$2	1 DRINK & 1 DOUGHNUT	\$1.70	\$0.30
PIANNE	\$3.50	2 LOLLY POPS & 1 CAKE	\$1.45	\$2.05
MAXWELL	\$10	1 DRINK & 1 CAKE	\$1.15	\$8.85
CLAUDIA	\$20	3 OF EVERYTHING!!	\$12.45	\$7.55

NUMBER OF MISTAKES _____



MATHEMATICS IN MOTION!

SPEED IS A measure of how fast an object is traveling

- THE FORMULA WE USE TO CALCULATE SPEED IS:
 SPEED = DISTANCE TRAVELLED / TIME TAKEN

VEHICLE	DISTANCE TRAVELLED	TIME TAKEN	SPEED
BMX CYCLE	10 metres	10 seconds	1 m/s
SKATE BOARD	20 metres	10 seconds	2 m/s
HONDA 500	80 metres	10 seconds	8 m/s
TOYOTA CAR	110 metres	10 seconds	11 m/s
BLUEBIRD BOAT	200 metres	5 seconds	40 m/s
767 JET	300 metres	5 seconds	60 m/s
MY FEET			
TEACHERS CAR			

- MAKE SOME MEASUREMENTS YOURSELF

1.			
2.			
3.			

- SOLVE THE RATIO PROBLEMS TO IDENTIFY THE STRONG MATHEMATICIAN WHO SAVED THE BRIDGE!

T 1:2 = 4:8 O 3:1 = 15:5 M 1:7 = 3:21
 V 4:1 = 12:3 H 1:8 = 2:16 A 10:1 = 60:6
 E 1:9 = 5:45 I 6:1 = 24:4 S 4:3 = 12:9
 R 1:5 = 2:10 F 30:30 = 100:100
 H O R A T I O U S O F R O M E
 16 19 10 60 4 24 15 3 12 15 30 10 15 21 5

WHIZZ-KIDS WORKSHEET 15

NIFTY NUMBERS

$$\begin{aligned} 11 + 14 &= 25 \\ 14 - 11 &= 3 \\ 12 \times 5 &= 60 \\ 16 \div 4 &= 4 \\ 13 + 16 &= 29 \\ 18 - 12 &= 6 \\ 11 \times 10 &= 110 \\ 15 \div 5 &= 3 \\ 19 + 18 &= 37 \\ 17 + 15 &= 32 \end{aligned}$$

MONEY MIXTURES

$$\begin{aligned} 15c + 15c &= 30c \\ 10c - 6c &= 4c \\ 3 \times 10c &= 30c \\ 7 \times 20c &= \$1.40 \\ 50c + 20c &= 70c \\ 50c - 20c &= 30c \\ \$4 + \$6 &= \$10 \\ \$9 - \$5 &= \$4 \\ \$20 \times 3 &= \$60 \\ \$80 \div 4 &= \$20 \end{aligned}$$

VISCOUS VARIABLES

$$\begin{aligned} a + a &= 2a \\ 2b + b &= 3b \\ c + 2c &= 3c \\ 3d + 3d &= 6d \\ 3c + 2c &= 5c \\ f - f &= 0 \\ 3g - g &= 2g \\ 5h - 2h &= 3h \\ 5i - 4i &= i \\ 2j + 2j + 2j &= 6j \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 123 + 100 &= 223 \\ 300 + 200 &= 500 \\ 100 - 75 &= 25 \\ 200 - 50 &= 150 \\ 40 \times 6 &= 240 \\ 70 \times 8 &= 560 \\ 40 \div 5 &= 8 \\ 80 \div 4 &= 20 \\ 333 + 333 &= 666 \\ 625 - 125 &= 500 \end{aligned}$$

THE QUINTUS QUIZ

- HOW MANY DAYS IN JULY 31
- WHAT DAY IS JUNE 3rd Monday
- WHAT DATE IS THE FOURTH TUESDAY OF JULY 23rd
- WHAT DATE IS THE SECOND FRIDAY OF JUNE 14th
- HOW MANY MONDAYS IN JULY 5

JUNE						
M	T	W	T	F	S	S
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY						
M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NUMBER OF MISTAKES _____

- UP AND DOWN -

HOW MANY FLOORS DID THE LIFT TRAVEL AND WHICH WAY WAS IT GOING?

FROM THIS FLOOR	TO THIS FLOOR	HOW MANY? WHICH WAY?
0	1	1 up
1	5	4 up
5	8	3 up
8	4	4 down
4	3	1 down
3	0	3 down
0	2	2 up
2	10	8 up
10	6	4 down
6	5	1 down
5	0	5 down

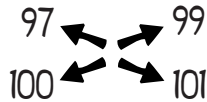
6-9



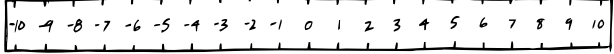
HERE IS MT. COOK'S DAILY TEMPERATURE (°C) LOG SHEET. FILL IN THE GAPS!



START OF THE DAY	CHANGE IN TEMPERATURE	MIDDAY RECORDING
4°	RISE 6°	10°
3°	FALL 5°	-2°
5°	RISE 2°	7°
1°	FALL 7°	-6°
2°	RISE 8°	10°
4°	FALL 4°	0°
6°	FALL 7°	-1°
-3°	RISE 8°	5°
-10°	RISE 10°	0°
-4°	FALL 3°	-7°
-3°	RISE 4°	1°
-2	FALL 1°	-3°



MAXINE MINUS PETE POSITIVE INTEGERS



-8 + 2 = -6	-5 + 9 = 4	-7 + 3 = -4	2 - 5 = -3
6 + 8 = 14	-7 - 3 = -10	13 + 4 = 17	-7 + 9 = 2
5 - 9 = -4	8 - 8 = 0	-7 - 8 = -15	8 - 5 = 3
-9 + 1 = -8	-1 - 6 = -7	4 - 8 = -4	-1 - 2 = -3
-3 - 1 = -4	-20 + 7 = -13	-6 + 9 = 3	-8 + 9 = 1
-1 + 5 = 4	-9 - 9 = -18	-10 + 3 = -7	-6 - 9 = -15
-3 + 6 = 3	-7 + 1 = -6	6 - 7 = -1	7 - 9 = -2
9 - 2 = 7	2 - 9 = -7	-9 + 6 = -3	-5 + 3 = -2
-3 + 3 = 0	-9 - 4 = -13	-3 + 5 = 2	-8 - 9 = -17

"HOW MANY PEAS IN A PIE?" ONE.

— SHADE IN ALL THE MISTAKES TO FIND OUT!

+	-4	-7	2	5	-6	4	1	-3	-5	6	-1	7
1	-3	-6	3	6	-5	5	2	-2			0	8
-3				2	-9	1	-2	-6		3	-9	4
-5		-12		0	-11	-1	-4	-8			-6	2
6		-1		11	0	10	7	3		12	5	13
-1				4	-7	3	0	-4			-2	6
7	3	0	9	12				4	2	13	6	14
-4	-8	-11	-2	1		0		-7	-9	2	-5	3
-7	-11	-14	-5	-2		-3		-10	-12	-1		
2	-2	-5	4	7		6		-1	-3	8		
5	1	-2	7	10		9		2	0	11		

THIS PUZZLE MIGHT NEED A CALCULATOR!

- A QUESTION OF MATHS -

"IT'S EXCELLENT FUN TO ANSWER SUMS!" "YEAH!"

M.C. ADDITION D.J. ELAINE EQUAL

-16 + 17 = 1	-9 + 37 = 28	52 - 83 = -31	-96 + 16 = -80
-113 - 56 = -169	-34 - 7 + 11 = -30	50 - 18 - 23 = 9	-8 - 12 + 83 = 63
40 - 19 - 12 = 9	44 - 53 + 60 = 51	-75 - 57 = -132	13 - 12 = 1
28 - 3 = 25	-6 - 7 = -13	-11 + 11 = 0	-11 - 11 = -22
-9 - 10 = -19	-34 + 18 = -16	-31 - 7 = -38	6 - 13 = -7
-22 - 25 = -47	23 - 47 = -24	-50 - 72 = -122	-17 - 26 = -43
-14 - 21 = -35	26 - 12 = 14	-14 - 21 = -35	30 + 41 = 71

- MATHS QUESTIONS YOU WERE ALWAYS AFRAID TO ASK!

SOLVE THE SUMS & WRITE THE LETTER ABOVE THE ANSWERS IN THE CODE!

WHAT HAPPENED TO THE PLANT IN THE MATHS ROOM?
I I G R E W S Q A R E R O O T S
 -7 -23 -13 -15 4 -8 5 29 -9 1 -15 4 -15 22 22 -23 5

WHY WASN'T DORIS IN THE MATHS CLASS?
 SH E W A S S U M - W H E R E E L S
 5 -4 4 -8 1 5 5 -9 -6 -8 4 4 -15 4 4 10 5 4

WHEN DOES 5 + 5 = 12?
 WH E N Y O U R H O M E W O R K
 -8 -4 4 -24 9 22 -9 -15 -4 22 -6 4 -8 22 -15 -2

I S W R O N G
 -7 5 -8 -15 22 -24 -13

L 30 - 20 = 10	K -7 + 5 = -2	M -6 - 0 = -6	Y 5 + 4 = 9
N -6 - 18 = -24	H -15 + 11 = -4	O -3 + 25 = 22	A -3 + 4 = 1
U 10 - 19 = -9	Q 10 + 19 = 29	S 17 - 12 = 5	W -5 - 3 = -8
E -13 + 17 = 4	R -9 - 6 = -15	G 7 - 20 = -13	T -15 - 8 = -23
I -3 - 4 = -7			

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 13 + 12 &= 25 \\ 13 - 12 &= 1 \\ 11 \times 5 &= 55 \\ 12 \div 4 &= 3 \\ 14 + 10 &= 24 \\ 14 - 10 &= 4 \\ 12 \times 7 &= 84 \\ 16 \div 8 &= 2 \\ 15 + 19 &= 34 \\ 17 + 11 &= 28 \end{aligned}$$

TRENDY TABLES

$$\begin{aligned} 6 \times 2 &= 12 \\ 6 \times 3 &= 18 \\ 6 \times 4 &= 24 \\ 6 \times 6 &= 36 \\ 6 \times 7 &= 42 \\ 6 \times 8 &= 48 \\ 6 \times 10 &= 60 \\ 6 \times 11 &= 66 \\ 6 \times 12 &= 72 \\ 6 \times 13 &= 78 \end{aligned}$$



SOFT SUBSTITUTES

$$\begin{aligned} a = 10, a + 4 &= 14 \\ b = 12, b + 11 &= 23 \\ c = 11, c - 2 &= 9 \\ d = 13, d - 4 &= 9 \\ e = 15, 11 + e &= 26 \\ f = 14, 19 - f &= 5 \\ g = 8, 12g &= 96 \\ h = 16, 2h &= 32 \\ i = 11, 3i &= 33 \\ j = 20, 5j &= 100 \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 12 \text{ ADDED TO } 21 &\text{ IS } 33 \\ 9 \text{ TIMES } 30 &\text{ IS } 270 \\ \$10.35 + \$12.45 &= \$22.80 \\ \$11.60 + \$17.90 &= \$29.50 \\ 975 - 900 + 70 + 5 &= 150 \\ 800 + 60 + 6 &= 866 \\ 333 + 444 &= 777 \\ 555 + 222 &= 777 \\ 450 - 170 &= 280 \\ 369 - 265 &= 104 \end{aligned}$$

THE QUINTUS QUIZ

-FIND THE COST FOR...

- 1 PARENT AND 1 CHILD \$2.50
- 1 PARENT AND 4 CHILDREN \$4
- 2 PARENTS AND 1 CHILD \$4.50
- 2 PARENTS AND 4 CHILDREN \$6
- 3 PARENTS AND 3 CHILDREN \$7.50



NUMBER OF MISTAKES _____

A FEAST OF TASTY PRODUCTS

STARTERS

$$\begin{aligned} -6 \times -6 &= 36 & -7 \times -6 &= 42 & -5 \times -7 &= 35 & 3 \times -4 &= -12 \\ 9 \times -12 &= -108 & -10 \times 10 &= -100 & -3 \times -4 &= 12 & 3 \times -7 &= -21 \\ -6 \times 7 &= -42 & -6 \times 7 &= -42 & -5 \times -5 &= 25 & -11 \times -4 &= 44 \\ -12 \times -9 &= 108 & 7 \times -6 &= -42 & -9 \times 12 &= -108 & 5 \times -7 &= -35 \\ -10 \times 11 &= -110 & -10 \times -11 &= 110 & -3 \times -7 &= 21 & 12 \times -6 &= -72 \end{aligned}$$

CANNIBAL CODES! SOLVE THESE PROBLEMS TO ANSWER THE QUESTIONS!

M -11 $\begin{array}{r} \times 8 \\ -88 \end{array}$	F -9 $\begin{array}{r} \times 6 \\ 54 \end{array}$	G -4 $\begin{array}{r} \times 8 \\ -32 \end{array}$	D 7 $\begin{array}{r} \times 8 \\ 56 \end{array}$	Q -5 $\begin{array}{r} \times -8 \\ 40 \end{array}$
Y -7 $\begin{array}{r} \times 2 \\ -14 \end{array}$	R -9 $\begin{array}{r} \times -5 \\ 45 \end{array}$	N 8 $\begin{array}{r} \times -3 \\ -24 \end{array}$	I -14 $\begin{array}{r} \times 5 \\ -70 \end{array}$	U -13 $\begin{array}{r} \times 7 \\ -91 \end{array}$
P -4 $\begin{array}{r} \times -9 \\ 36 \end{array}$	H 12 $\begin{array}{r} \times -7 \\ -84 \end{array}$	E -15 $\begin{array}{r} \times 6 \\ -90 \end{array}$	K -20 $\begin{array}{r} \times -4 \\ 80 \end{array}$	O 7 $\begin{array}{r} \times -7 \\ -49 \end{array}$
T -14 $\begin{array}{r} \times 2 \\ -28 \end{array}$	S -12 $\begin{array}{r} \times -2 \\ 24 \end{array}$	A 15 $\begin{array}{r} \times -5 \\ -75 \end{array}$	B -5 $\begin{array}{r} \times -12 \\ 60 \end{array}$	V -23 $\begin{array}{r} \times 3 \\ -69 \end{array}$

WHAT IS A CANNIBAL'S FAVOURITE FOOD?

B A K E D B E I N G S

60 -75 80 -90 56 60 -90 -70 -24 -32 24



WHAT DID THE CANNIBAL SAY WHEN HE SAW THE MAN ASLEEP?

A H B R E A K F A S T I N B E D

-75 -84 60 45 -90 -75 80 54 -75 24 -28 -70 -24 60 -90 56

HOW DO CANNIBALS LOOK SMALL PEOPLE AND LOBRAS?

A S S N A K E A N D P Y G M Y P I E

-75 24 24 -24 -75 80 -70 -75 -24 56 36 -14 -32 -88 -14 36 -70 -90

102 ↔ 103
104 ↔ 105

- DIVIDING INTEGERS -

POSITIVE ÷ POSITIVE = POSITIVE

$$\begin{aligned} 9 \div 3 &= 3 & 16 \div 4 &= 4 & 35 \div 7 &= 5 & 48 \div 6 &= 8 \\ \frac{30}{6} &= 5 & \frac{25}{5} &= 5 & \frac{40}{8} &= 5 & \frac{36}{4} &= 9 \end{aligned}$$

POSITIVE ÷ NEGATIVE = NEGATIVE

$$\begin{aligned} 12 \div -2 &= -6 & 20 \div -4 &= -5 & 24 \div -6 &= -4 & 32 \div -4 &= -8 \\ 30 \div -3 &= -10 & 45 \div -5 &= -9 & 56 \div -7 &= -8 & 21 \div -3 &= -7 \\ 27 \div -9 &= -3 & 64 \div -8 &= -8 & 12 \div -1 &= -12 & 14 \div -7 &= -2 \end{aligned}$$

NEGATIVE ÷ POSITIVE = NEGATIVE

$$\begin{aligned} -48 \div 6 &= -8 & -32 \div 8 &= -4 & -18 \div 2 &= -9 & -27 \div 3 &= -9 \\ -21 \div 7 &= -3 & -60 \div 5 &= -12 & -24 \div 3 &= -8 & -32 \div 4 &= -8 \\ -14 \div 1 &= -14 & -36 \div 4 &= -9 & -63 \div 9 &= -7 & -56 \div 8 &= -7 \end{aligned}$$

NEGATIVE ÷ NEGATIVE = POSITIVE

$$\begin{aligned} -10 \div -10 &= 1 & -9 \div -9 &= 1 & -8 \div -8 &= 1 & -40 \div -8 &= 5 \\ -28 \div -4 &= 7 & -20 \div -5 &= 4 & -18 \div -6 &= 3 & -8 \div -4 &= 2 \\ -\frac{15}{-3} &= 5 & -\frac{16}{-2} &= 8 & -\frac{24}{-2} &= 12 & -\frac{27}{-3} &= 9 \end{aligned}$$

WHAT DID THE ASTROLOGER SAY TO THE YOUNG LOVERS?

TO FIND THE ANSWER COMPLETE THESE SUMS!

$$\begin{aligned} G -\frac{35}{5} &= -7 & R \frac{44}{-11} &= -4 & N -\frac{50}{10} &= -5 & O -\frac{36}{-12} &= 3 \\ L -81 \div 9 &= -9 & A 32 \div -4 &= -8 & T -72 \div -8 &= 9 & E -12 \div 12 &= -1 \\ I -\frac{12}{-3} &= 4 & U \frac{100}{20} &= 5 & V \frac{0}{-5} &= 0 & M \frac{49}{7} &= 7 \\ S -60 \div -6 &= 10 & P -4 \div -4 &= 1 & H 30 \div -3 &= -10 \end{aligned}$$

"SAME SIGNS GIVE THE"

10 -8 7 -1 10 4 -7 -5 10 -7 4 0 -1 9 -10 -1

POSITIVE RESULT!

1 8 10 4 9 4 0 -1 -4 -7 10 5 -9 9

PIRATE PRODUCTS

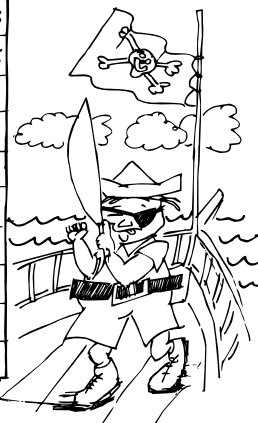
$$\begin{aligned} 8 \times -5 &= -40 & 5 \times 9 &= 45 & -9 \div 3 &= -3 & 77 \div 7 &= 11 \\ -2 \times -7 &= 14 & -3 \times 10 &= -30 & -28 \div 4 &= -7 & -36 \div -4 &= 9 \\ 4 \times 4 &= 16 & 6 \times 6 &= 36 & 45 \div 3 &= 15 & -20 \div -20 &= 1 \\ -7 \times -7 &= 49 & 7 \times -12 &= -84 & 26 \div 2 &= 13 & 90 \div 5 &= 18 \\ -8 \times 6 &= -48 & -16 \times -2 &= 32 & -44 \div -11 &= 4 & 22 \div -1 &= -22 \\ 3 \times 7 &= 21 & 5 \times -4 &= -20 & 12 \div -6 &= -2 & -60 \div 6 &= -10 \\ -3 \times -9 &= 27 & -10 \times -6 &= 60 & -80 \div -10 &= 8 & -96 \div -8 &= 12 \\ 9 \times 10 &= 90 & -5 \times -5 &= 25 & -24 \div 1 &= -24 & 250 \div -5 &= -50 \\ 8 \times 9 &= 72 & 17 \times -1 &= -17 & 30 \div 5 &= 6 & 0 \div -4 &= 0 \end{aligned}$$

NOW SOLVE THESE PROBLEMS AND SHADE IN ALL THE BOXES WITH ANY OF THE CORRECT ANSWERS!

$$\begin{aligned} -6 \times 5 &= -30 & -4 \times -9 &= 36 & -20 \div 4 &= -5 & -15 \div 5 &= -3 \\ -4 \times -8 &= 32 & -8 \times -14 &= 112 & -84 \div 12 &= -7 & 39 \div -3 &= -13 \\ 3 \times -12 &= -36 & -6 \times -16 &= 96 & -28 \div -7 &= 4 & 51 \div -3 &= -17 \\ 15 \times 7 &= 105 & 5 \times -20 &= -100 & -81 \div -9 &= 9 & 51 \div -17 &= -3 \end{aligned}$$

15	-10	0	14	44		13	40	-1	28
8	-2	55	75		16		14	18	16
1	74	19	42	33		15	12	-22	8
2	29	26	47	-6		-76	6	-73	19
11	-10	15	1	14		29	15	1	-11
2	20	10	0	-2		2	12	48	2
-12	52	14		89		-6		27	12
50	49	-1		60		-1		-14	18
18	8	12	0		26		1	0	99
0	-16	21	22	18	-1	14	0	24	2

AN ANCHOR





- INTO EVERYTHING -
D.J. ELAINE EQUAL
HAS THESE SUMS FOR YOU TO SOLVE!
SO GO TO IT!

- | | | | |
|--------------------|---------------------|---------------------|---------------------|
| $11 + 7 = 18$ | $6 + 4 = 10$ | $-6 + 4 = -2$ | $-6 - 4 = -10$ |
| $-8 + 8 = 0$ | $-11 + 7 = -4$ | $-11 - 7 = -18$ | $8 - 8 = 0$ |
| $-13 - 6 = -19$ | $-8 - 8 = -16$ | $13 - 6 = 7$ | $-13 + 6 = -7$ |
| $-12 + 3 = -9$ | $5 - 5 = 0$ | $-5 + 5 = 0$ | $-5 - 5 = -10$ |
| $-8 - 2 = -10$ | $-7 - 2 = -9$ | $4 - 1 = 3$ | $-7 - 3 = -10$ |
| $-9 - 9 = -18$ | $-10 + 1 = -9$ | $-9 + 9 = 0$ | $9 - 9 = 0$ |
| $40 \div 8 = 5$ | $-2 - 2 = -4$ | $-2 + 2 = 0$ | $2 - 2 = 0$ |
| $-50 \div 5 = -10$ | $-40 \div 8 = -5$ | $40 \div -8 = -5$ | $50 \div 5 = 10$ |
| $-60 \div -12 = 5$ | $50 \div -5 = -10$ | $-60 \div 12 = -5$ | $60 \div 12 = 5$ |
| | $-100 \div 4 = -25$ | $100 \div -4 = -25$ | $-100 \div -4 = 25$ |

WHAT DID D.J. ELAINE EQUAL SAY WHEN SHE LOOKED IN HER PIGGY BANK. SHADE IN ALL THE SQUARES THAT CONTAIN A MISTAKE TO FIND OUT!

X	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5
-8				24			0		-16		-32	-40
-7	42		28	21		7	0		-14		-28	-35
-6	36		24	18		6	0		-12		-24	-30
-5			15			0					-20	-25
-4	24	20	16	12	8	4	R	-4	-8	-12	-16	-20
-3	18	15	12	9	6	3		-3	-6	-9	-12	-15
-2		10	8	6		2	0	-2	-4			
-1			4			1	0	-1	-2	-3		-5
0		0		0		0	0	0	0	0		0
1		-5	-4	-3		-1	0	1	2	3		5

(I C U R M T) I SEE YOU ARE EMPTY



106 ↔ 107
108 ↔ 113

- SIGNS IN OUR TIMES -

TIME YOURSELF FOR THIS PAGE!

HELP MAXINE MINUS TO WRITE THESE NUMBERS IN ORDER, SMALLEST THROUGH TO LARGEST!

5	8	1	7	4	14	5	7	8	
6	-4	5	-8	0	-8	-5	-4	0	6
-3	2	8	0	-4	-4	-3	0	2	8
-7	5	7	-2	3	-7	-2	3	5	7
0	-6	-4	-8	1	-8	-6	-4	0	1
3	-3	8	1	-1	-3	-1	3	8	1



CALCULATE BY - ADDING & SUBTRACTING

- | | | | |
|----------------|-----------------|-----------------|---------------|
| $-6 + 5 = -1$ | $-7 - 2 = -9$ | $-8 - 5 = -13$ | $-9 + 4 = -5$ |
| $-12 + 6 = -6$ | $-3 + 7 = 4$ | $-2 - 6 = -8$ | $-8 + 9 = 1$ |
| $-1 + 1 = 0$ | $9 - 6 = 3$ | $6 - 9 = -3$ | $8 - 12 = -4$ |
| $-7 - 8 = -15$ | $-12 - 4 = -16$ | $6 + 5 = 11$ | $-4 + 2 = -2$ |
| $-8 + 3 = -5$ | $-4 + 9 = 5$ | $-13 - 8 = -21$ | $-7 + 13 = 6$ |

- DIVIDING

- | | | | |
|--------------------|--------------------|--------------------|--------------------|
| $40 \div 5 = 8$ | $-50 \div 5 = -10$ | $60 \div -5 = -12$ | $39 \div -3 = -13$ |
| $-67 \div 3 = -23$ | $-96 \div -3 = 32$ | $-24 \div 4 = -6$ | $48 \div -4 = -12$ |
| $-72 \div -4 = 18$ | $28 \div -7 = -4$ | $-56 \div -8 = 7$ | $-48 \div 6 = -8$ |

- MULTIPLYING

- | | | | |
|----------------------|---------------------|---------------------|---------------------|
| $10 \times -4 = -40$ | $-8 \times -5 = 40$ | $-7 \times 3 = -21$ | $-6 \times 9 = -54$ |
| $-9 \times -2 = 18$ | $8 \times -8 = -64$ | $-8 \times -3 = 24$ | $0 \times -1 = 0$ |
| $-4 \times -5 = 20$ | $7 \times -8 = -56$ | $-4 \times -7 = 28$ | $6 \times 12 = 72$ |

USE A > OR < SIGN TO MAKE THESE SENTENCES TRUE!

- | | | | |
|--------|--------|--------|---------|
| 7 < 5 | 9 > -2 | -3 < 6 | -7 < 7 |
| 4 < -3 | 7 > -8 | -5 < 2 | -6 < -4 |

TIME TAKEN _____
NUMBER CORRECT _____

WHIZZ-KIDS WORKSHEET!

NIPTY NUMBERS

- | |
|----------------------|
| $17 + 14 = 31$ |
| $18 - 11 = 7$ |
| $15 \times 6 = 90$ |
| $16 \div 4 = 4$ |
| $18 + 13 = 31$ |
| $13 - 12 = 1$ |
| $12 \times 11 = 132$ |
| $15 \div 5 = 3$ |
| $19 + 16 = 35$ |
| $13 + 17 = 30$ |

17

FANTASTIC FRACTIONS

- | |
|---|
| $\frac{1}{2}$ OF 6 = 3 |
| $\frac{1}{5}$ OF 10 = 2 |
| $\frac{1}{3}$ OF 12 = 4 |
| $\frac{1}{4}$ OF 18 = 4.5 |
| $\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$ |
| $\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$ |
| $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$ |
| $\frac{1}{4} + \frac{1}{5} = \frac{9}{20}$ |
| $\frac{1}{4} - \frac{1}{5} = \frac{1}{20}$ |

MIGHTY METRICS

- | |
|---|
| $70 \text{ sec} + 50 \text{ sec} = 120 \text{ s (2 min)}$ |
| $38 \text{ sec} + 26 \text{ sec} = 64 \text{ s (1m4s)}$ |
| $69 \text{ m} - 49 \text{ m} = 20 \text{ m}$ |
| $43 \text{ km} - 27 \text{ km} = 16 \text{ km}$ |
| $1000 \text{ g} = 1 \text{ kg}$ |
| $5000 \text{ g} = 5 \text{ kg}$ |
| $2000 \text{ mg} = 2 \text{ g}$ |
| $2500 \text{ mg} = 2.5 \text{ g}$ |
| $300 \text{ cm} = 3 \text{ m}$ |
| $350 \text{ cm} = 3.5 \text{ m}$ |

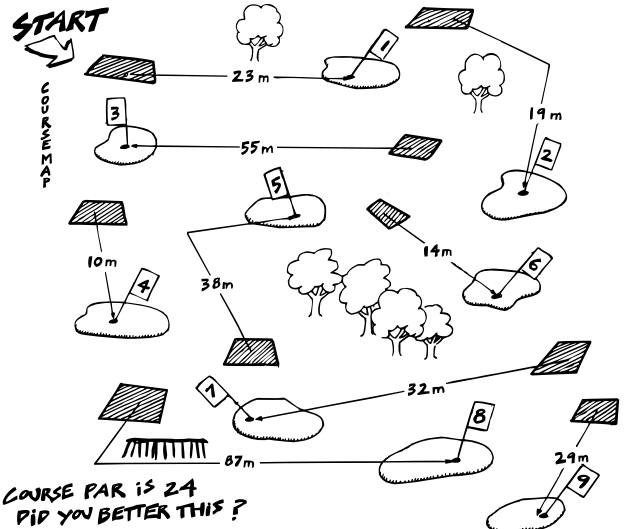
EXTRA EXAMPLES

- | |
|---|
| $30 \text{ DAYS} = 1 \text{ MONTH}$ |
| $60 \text{ MINUTES IN } 1 \text{ HOUR}$ |
| $1.4 + 1.3 = 2.7$ |
| $2.7 - 1.5 = 1.2$ |
| $0.4 \times 6 = 2.4$ |
| $1.2 \div 4 = 0.3$ |
| $6, 12, 24, 48, 96$ |
| $975 + 579 = 1554$ |
| $420 - 24 = 396$ |
| $5^2 = 25$ |

THE QUINTUS QUIZ

- FIND THE COST OF...

- | |
|-----------------------------|
| 10 FELT TIPS \$20 |
| 12 PENCILS \$2 |
| 10 RULERS \$7.50 |
| 20 BIROS \$10 |
| 12 PENCILS & 12 RULERS \$11 |

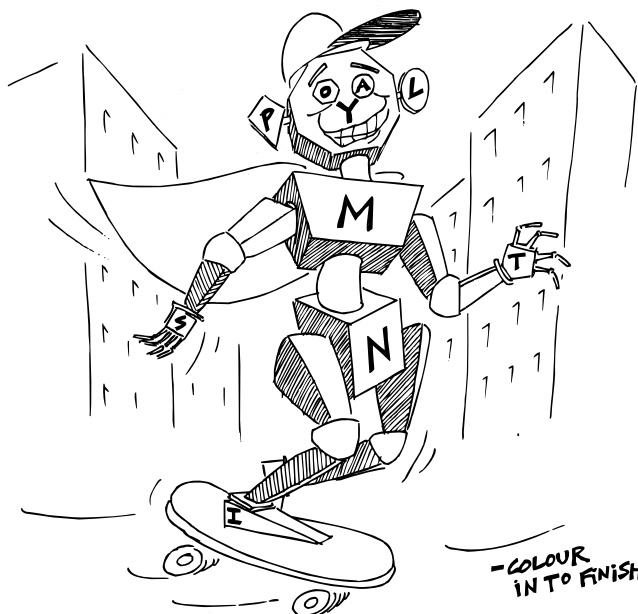


COURSE PAR IS 24
DID YOU BETTER THIS?

EXAMPLE ANSWER ONLY

HOLE	DISTANCE	CLUB & STRENGTH	STROKES
1	23 m	C5, S4 + C1, S3	2
2	19 m	C5, S3 + C1, S4	2
3	55 m	C5, S4 + C5, S4 + C5, S3	3
4	10 m	C2, S3 + C1, S4	2
5	38 m	C5, S6 + C2, S4	2
6	14 m	C2, S4 + C2, S3	2
7	32 m	C5, S4 + C2, S6	2
8	87 m	C5, S6 + C5, S6 + C5, S6 - C1, S3	4
9	29 m	C5, S4 + C2, S3 + C1, S3	3
TOTAL			22

—MEET EVERY MATHEMATICIANS HERO!
WRITE THE CORRECT LETTER ABOVE THE POLYGON
IT REPRESENTS!



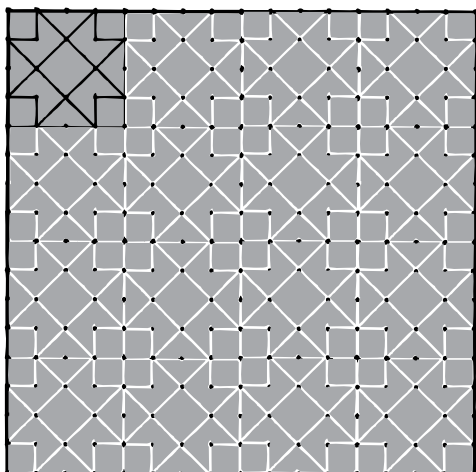
I	T	S		P	O	L	Y	M	A	N
TRIANGLE	PENTAGON	SQUARE		KITE	HEXAGON	ELLIPSE	OCTAGON	TRAPEZIUM	CIRCLE	RECTANGLE

118 ↔ 119
120 ↔ 123

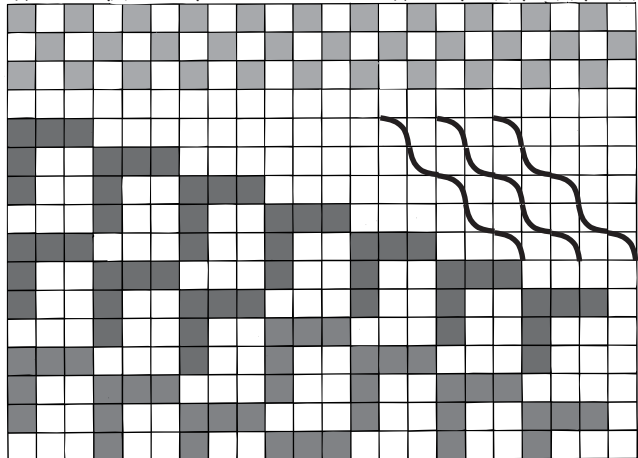
REPEAT THIS
PATTERN →
IN ALL THE
OTHER SQUARES
NOW COLOUR
YOUR DESIGN!

WHEN YOU
REPEAT
PATTERNS
LIKE THIS YOU
ARE DRAWING A
TESSELLATION

NOW DESIGN
IN THE
SQUARES
BELOW



THREE EXAMPLES ARE GIVEN BELOW - THERE ARE MANY MANY MORE



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 38-12 &= 26 & 58-27 &= 31 \\ 15+19 &= 34 & 63+42 &= 105 \\ 27-15 &= 12 & 18-15 &= 3 \\ 4 \times 33 &= 132 & 35 \div 7 &= 5 \\ 74+8 &= 82 & 45 \div 9 &= 5 \\ 8 \times 40 &= 320 & 18 \times 3 &= 54 \\ 8 \times 30 &= 240 & 4 \times 15 &= 60 \\ 360 \div 6 &= 60 & 72+70 &= 142 \\ 480 \div 4 &= 120 & 49 \div 7 &= 7 \\ 97+13 &= 110 & 108-15 &= 93 \end{aligned}$$

TRENDY TABLES

$$\begin{aligned} 7 \times 8 &= 56 \\ 7 \times 5 &= 35 \\ 7 \times 9 &= 63 \\ 7 \times 12 &= 84 \\ 7 \times 11 &= 77 \\ 7 \times 3 &= 21 \\ 7 \times 6 &= 42 \\ 7 \times 10 &= 70 \\ 7 \times 8 &= 56 \\ 7 \times 4 &= 28 \end{aligned}$$

POSSIBLE PATTERNS

$$\begin{aligned} 1 \times 9 + 2 &= \text{II} & 37 \times 3 &= \text{IIII} \\ 12 \times 9 + 3 &= \text{IIII} & 37 \times 6 &= \text{IIIIII} \\ 123 \times 9 + 4 &= \text{IIIIII} & 37 \times 9 &= \text{IIIIIIII} \\ 1234 \times 9 + 5 &= \text{IIIIIIII} & 37 \times 12 &= \text{IIIIIIIIII} \\ 12345 \times 9 + 6 &= \text{IIIIIIIIII} & 37 \times 15 &= \text{IIIIIIIIIII} \end{aligned}$$

MAIL MIXTURES



WHAT COMBINATION OF 40c
AND 50c STAMPS DO YOU NEED TO
POST LETTERS WITH THESE AMOUNTS?

$$\begin{aligned} \$1.40 & 2 \times 50c 1 \times 40c \\ \$1.30 & 2 \times 40c 1 \times 50c \\ \$1.70 & 3 \times 40c 1 \times 50c \\ \$3.30 & 5 \times 50c 2 \times 40c \\ \$5.20 & 8 \times 50c 3 \times 40c \end{aligned}$$



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 23 + 22 &= 45 \\ 24 - 18 &= 6 \\ 21 \times 6 &= 126 \\ 25 \div 5 &= 5 \\ 24 + 21 &= 45 \\ 26 - 23 &= 3 \\ 20 \times 9 &= 180 \\ 21 \div 7 &= 3 \\ 26 - 15 &= 11 \\ 36 - 27 &= 9 \end{aligned}$$

DANDY DECIMALS

$$\begin{aligned} 1.5 + 1.4 &= 2.9 \\ 1.7 + 1.1 &= 2.8 \\ 2.8 - 1.5 &= 1.3 \\ 3.9 - 3.1 &= 0.8 \\ 2 - 0.6 &= 1.4 \\ 4 - 0.7 &= 3.3 \\ 10 \times 2.5 &= 25 \\ 10 \times 0.03 &= 0.3 \\ 20\% \text{ AS A DECIMAL IS } & 0.20 \\ 37\% \text{ AS A DECIMAL IS } & 0.37 \end{aligned}$$

RADICAL ROMANS

$$\begin{aligned} X &= 10 \\ XX &= 20 \\ L &= 50 \\ LXX &= 70 \\ C &= 100 \\ XXX &= 30 \\ LX &= 60 \\ LXXX &= 80 \\ CI &= 101 \\ CX &= 110 \end{aligned}$$



EXTRA EXAMPLES

$$\begin{aligned} 589 + 300 &= 889 \\ 600 + 600 &= 1200 \\ 500 - 170 &= 330 \\ 600 - 128 &= 472 \\ 90 \times 5 &= 450 \\ 52 \times 10 &= 520 \\ 100 \div 10 &= 10 \\ 2341 \div 100 &= 23.41 \\ 666 + 777 &= 1443 \\ 985 - 589 &= 396 \end{aligned}$$

THE QUINTUS QUIZ

I LEFT HOME AT 8:15
IT TOOK 30 MINUTES TO
GET TO SCHOOL. SCHOOL WENT
FOR $6\frac{2}{3}$ HOURS. SUPPER
WAS AT 9:40 TODAY. I WAS
OUT OF BED FOR 15 HOURS.

- THURSDAY -
OUT OF BED 7:30 a.m.
LEFT HOME 8:15
GOT TO SCHOOL 8:45
SCHOOL FINISHED 3:25
ARRIVED HOME 5:00
SUPPERTIME 9:40
INTO MY BED 10:30

NUMBER RELATIONS

FOR EACH OF THE SERIES BELOW, FILL IN THE MISSING NUMBERS!

- 2 4 6 8 10 12 14 16 18 20
 3 5 7 9 11 13 15 17 19 21
 4 8 12 16 20 24 28 32 36 40
 1 5 2 5 3 5 4 5 5 5
 30 27 24 21 18 15 12 9 6 3
 1 4 9 16 25 36 49 64 81 100
 2 3 5 8 12 17 23 30 38 47
 1 2 4 8 16 32 64 128
 4 5 9 14 23 37 60
 1 2 3 5 8 13 21
 5 15 30 50 75 105 140
 22 24 28 36 52 84 148



NOW CROSS OUT ALL THE SQUARES WHERE THE NUMBERS ARE NOT IN YOUR ANSWERS.

Y	14	79	0	U	24	43	73	87
F	C		A	N		11	46	
A	L	W		A	Y	S		
4	52	84	400	23	84	75		
C		O	H	V	N	T		
36	700	15	70	105	28	17		
O		K	N	Z	A			
36	29	3	18	Z	33	49		
76	230	C	A	L	B	25	84	
U	L	A	T	O	R		200	
24	64	12	32	15	23			

YOU CAN ALWAYS COUNT ON A CALCULATOR



WHAT IS THE BEST THING TO DO IF YOUR SHIP STARTS TO SINK?

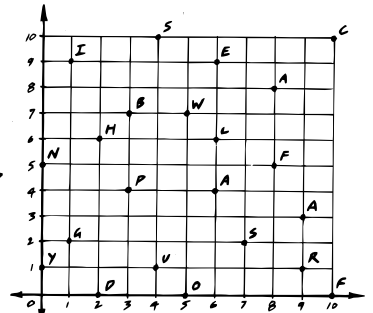
TO FIND THE ANSWER, WRITE THE CORRECT LETTER ABOVE EACH CO-ORDINATE PAIR!

G R A B A
 (1,2) (9,1) (6,4) (3,7) (8,8)

P L E C E O F
 (3,4) (1,9) (6,9) (10,10) (6,9) (5,0) (8,5)

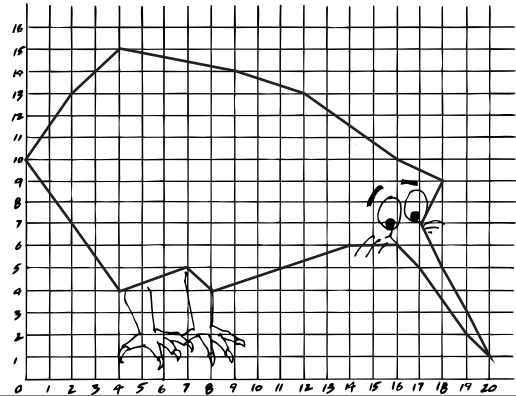
S O A P A N D W A S H
 (7,2) (5,0) (6,4) (3,4) (8,8) (10,5) (2,0) (5,7) (9,3) (4,10) (2,6)

Y O U R S E L F A S H O R E !
 (0,1) (5,0) (4,1) (9,1) (7,2) (6,9) (6,6) (10,0) (9,3) (7,2) (2,6) (5,0) (9,1) (6,9)



NOW PLOT THESE POINTS ON THE GRAPH BELOW AND JOIN THEM AS YOU GO!

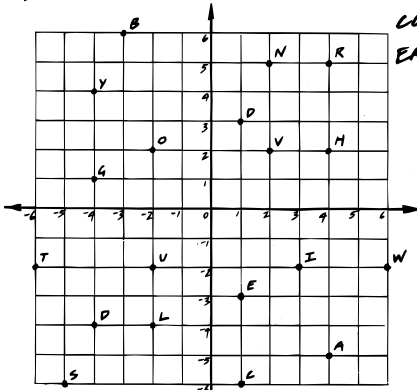
- (7,5) (8,4) (14,6) (16,6) (17,5) (19,2) (20,1) (19,3)
 (18,5) (17,7) (18,9) (16,10) (12,13) (9,14) (4,15) (2,13)
 (0,10) (2,7) (4,4) (7,5)



COLOUR ME IN!

124 ↔ 125
 126 ↔ 127

ANOTHER CANNIBAL CODE! TO DECODE WRITE THE CORRECT LETTER ABOVE EACH CO-ORDINATE PAIR!



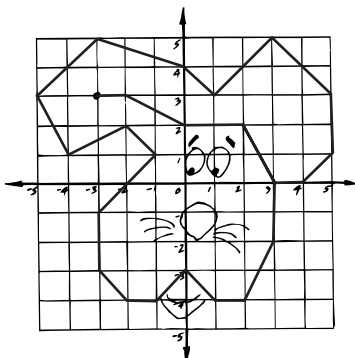
"D I D
 (1,3) (3,-2) (-4,-4)
 Y O U
 (-4,-4) (-2,2) (-2,2)
 H E A R
 (4,2) (1,-3) (4,-5) (4,5)
 A B O U I
 (4,-5) (-3,6) (-2,2) (-2,2) (-6,-2)
 I H E
 (-6,-2) (4,2) (1,-3)
 V E G E -
 (2,2) (1,-3) (-4,1) (1,-3)

HAVE FUN!

I A R I A N
 (-6,-2) (4,-5) (4,5) (3,-2) (4,-5) (2,5)
 C A N I B A L W H O O N L Y
 (1,-6) (4,-5) (2,5) (3,-2) (-3,6) (4,-5) (-2,-4) (6,-2) (4,2) (2,2) (-2,2) (2,5) (2,-4) (-4,4)
 A I E S W E D E S !
 (4,-5) (-6,-2) (1,-3) (-5,-6) (6,-2) (6,-2) (1,-3) (1,3) (1,-3) (-5,-6)

NOW PLOT THESE POINTS AND JOIN THEM AS YOU GO! COLOUR YOUR RESULT.

- (2,2) (3,0) (3,-2) (2,-4) (1,-4)
 (0,-3) (-1,-4) (-2,-4) (-3,-3) (-3,-1)
 (-1,1) (-2,2) (-4,1) (-5,3) (-3,5)
 (0,4) (1,3) (3,5) (5,3) (5,1)
 (4,0) (2,2) (0,2) (-2,3) (-3,3)



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

- 25 + 16 = 41
 25 - 16 = 9
 20 x 7 = 140
 36 ÷ 9 = 4
 27 + 28 = 55
 30 - 14 = 16
 24 x 5 = 120
 27 ÷ 3 = 9
 28 + 12 = 40
 33 - 26 = 7

MONEY MIXTURES

- 20c + 10c = 30
 40c + 20c = 60
 25c - 15c = 10
 50c - 50c = 0
 6 x 50c = \$3
 8 x 40c = \$3.20
 \$7 + \$9 = \$16
 \$9 - \$7 = \$2
 \$50 x 3 = \$150
 \$30 ÷ 6 = \$5

VISCOUS VARIABLES

- k + k = 2k
 2l - l = l
 m + 3m = 4m
 2n + 4n = 6n
 5p + 3p = 8p
 q - q = 0
 3r + 2r = 5r
 3s - 2s = s
 5t + 4t = 9t
 5t - 4t = t

EXTRA EXAMPLES

- 145 + 200 = 345
 400 + 300 = 700
 200 - 130 = 70
 100 - 48 = 52
 90 x 5 = 450
 80 x 6 = 480
 20 ÷ 10 = 2
 60 ÷ 12 = 5
 444 + 444 = 888
 841 - 241 = 600

THE QUINTUS QUIZ

- HOW MANY DAYS IN AUGUST? 31
 - WHAT DAY IS SEPTEMBER 15th? SUN
 - WHAT DATE IS THE THIRD SUNDAY OF AUGUST? 18th
 - WHAT DATE IS THE FIRST MONDAY OF SEPTEMBER? 2nd
 - HOW MANY WEDNESDAYS IN AUGUST? 4

AUGUST						
M	T	W	T	F	S	S
	1	2	3	4		
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER						
M	T	W	T	F	S	S
30				1		
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29



-MEET CARLA OUR CRAZY CALCULATOR!



CARLA IS SO CLEVER! EVERYTIME YOU GIVE HER A NUMBER, ANOTHER ONE POPS OUT!

TRY AND GUESS WHAT CARLA IS DOING AND FILL IN THE GAPS

NUMBERS IN	2	3	4	5	6	7	8	9	10	15	24
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
OUT	8	9	10	11	12	13	14	15	16	21	30

-THE RULE IS ADD 6

HERE'S WHAT CRAZY CARLA DID TO SOME OTHER NUMBERS. TRY AND WORK OUT WHAT SHE'S UP TOO!

IN	0	1	2	3	4	10	20	30	100
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
OUT	0	5	10	15	20	50	100	150	500

-THE RULE IS MULTIPLY BY 5

IN	0	1	2	3	4	8	10	20	200	1000
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
OUT	0	1/2	1	1 1/2	2	4	5	10	100	500

THE RULE IS HALVE THE NUMBER

IN	0	1	2	3	4	5	6	10	100	1000
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
OUT	1	3	5	7	9	11	13	21	201	2001

THE RULE IS TIMES TWO PLUS ONE

MORE FROM CARLA!



COMPLETE THE CHARTS BELOW!

IN	→	OUT
0	→	0
1	→	3
2	→	6
3	→	9
4	→	12
5	→	15
6	→	18
7	→	21
8	→	24
33	→	99

CARLA'S RULE MULTIPLY BY 3

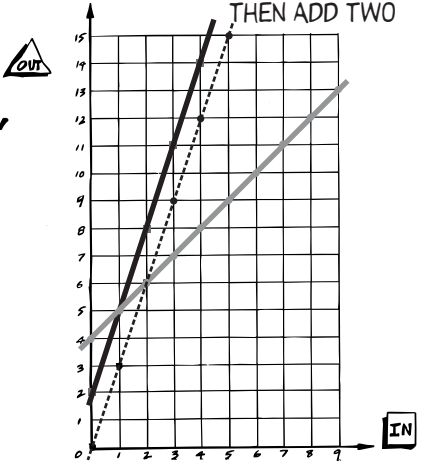
IN	→	OUT
0	→	4
1	→	5
2	→	6
3	→	7
4	→	8
5	→	9
6	→	10
7	→	11
8	→	12
9	→	13

CARLA'S RULE ADD FOUR

IN	→	OUT
0	→	2
1	→	5
2	→	8
3	→	11
4	→	14
5	→	17
6	→	20
7	→	23
8	→	26
9	→	29

CARLA'S RULE MULTIPLY BY 3 THEN ADD TWO

NOW USING THE GRAPH TRY AND PLOT AS MANY POINTS AS YOU CAN FROM EACH CHART! MAKE THE RESULTS FROM EACH CHART A DIFFERENT COLOUR. (THE FIRST FEW HAVE BEEN DONE FOR YOU.)



128 ↔ 129
131 ↔ 135

WHIZZ-KIDS WORKSHEET 22

NIFTY NUMBERS

21 + 13 = 34
21 - 13 = 8
20 × 5 = 100
28 ÷ 4 = 7
29 + 27 = 56
22 - 15 = 7
24 × 3 = 72
24 ÷ 3 = 8
23 - 21 = 2
34 - 25 = 9

TRENDY TABLES

8 × 2 = 16
8 × 3 = 24
8 × 4 = 32
8 × 5 = 40
8 × 7 = 56
8 × 8 = 64
8 × 9 = 72
8 × 10 = 80
8 × 12 = 96
8 × 20 = 160

SOFT SUBSTITUTES

k = 13, k + 5 = 18
l = 18, l + 12 = 30
m = 19, m - 10 = 9
n = 17, n - 3 = 14
p = 11, 4 + p = 15
r = 16, 20 - r = 4
s = 12, 10s = 120
t = 15, 4t = 60
u = 10, 9u = 90
v = 20, 11v = 220

EXTRA EXAMPLES

35 ADDED TO 47 IS 82
25 TIMES 20 IS 500
\$15.26 + \$11.35 = \$26.61
\$18.75 + \$16.50 = \$35.25
919 = 900 + 10 + 9
700 + 30 + 8 = 738
666 + 440 = 1106
1111 + 2222 = 3333
540 - 380 = 160
963 - 526 = 437

THE QUINTUS QUIZ

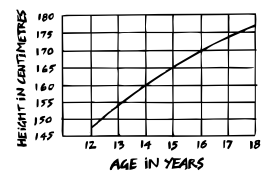
-FIND THE COST FOR...

3 ADULTS ONLY	\$9
2 ADULTS & 1 CHILD	\$8
2 ADULTS & 3 CHILDREN	\$12
1 ADULT & 2 CHILDREN	\$7
4 ADULTS & 5 CHILDREN	\$22



-GRAPHS GRAPHS GRAPHS!

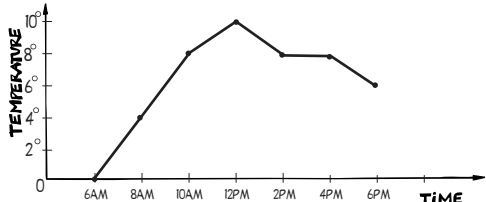
JODY'S HEIGHT FROM AGES 12-18



- AT WHAT AGE WAS JODY 165 CM TALL? 15 years
- IN WHICH TWO YEARLY PERIOD DID HER HEIGHT INCREASE MOST? 12 to 14 (approx 13 cm)
- WHAT HEIGHT WAS SHE AT AGE 13? 154 cm
- IS IT LIKELY THAT SHE WILL GROW MUCH TALLER? NO
- ESTIMATE HER HEIGHT AT AGE 20 179 cm

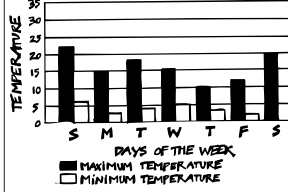
DRAW A LINE GRAPH TO SHOW THIS INFORMATION FOR PUTARUKU.

TEMPERATURE	0°	4°	8°	10°	8°	8°	6°
TIME OF DAY	6 AM	8 AM	10 AM	12 noon	2 PM	4 PM	6 PM



- AT WHAT TIME WAS THE HIGHEST TEMPERATURE RECORDED? 12 noon
- AT WHAT TIMES OF THE DAY WAS THE TEMPERATURE 8°? Between 2 and 4 pm, 8 am
- IN WHAT 2 HOURLY PERIOD DID THE GREATEST RISE OCCUR? Between 6-8 am, 8-10 am
- WHAT WAS THE TEMPERATURE AT 11 AM? Approx 9°

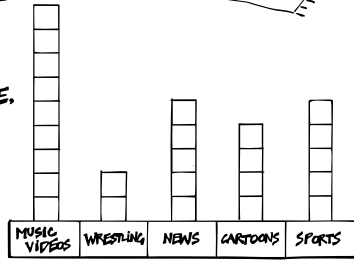
MAXIMUM AND MINIMUM TEMPERATURE READINGS.



- WHAT INFORMATION IS ON THE VERTICAL AXIS? TEMPERATURE
- WHAT INFORMATION IS ON THE HORIZONTAL AXIS? DAYS OF THE WEEK
- WHAT SCALE HAS BEEN USED ON THE VERTICAL AXIS? 1 GRID = 5°
- WHAT DAY HAD THE HIGHEST TEMPERATURE? SUNDAY
- WHAT WERE THE TEMPERATURES ON SATURDAY? MIN = 5 MAX = 20°

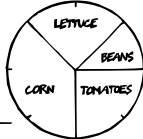
FAVOURITE T.V. SHOWS

THE PUPILS OF I.N. STEIN COLLEGE EACH DREW A SQUARE ABOVE THEIR FAVOURITE T.V. PROGRAMME. TO MAKE THIS GRAPH!



- WHICH PROGRAMME IS MOST POPULAR? MUSIC VIDEOS
- WHICH PROGRAMMES HAVE EQUAL POPULARITY? NEWS & SPORT
- HOW MANY PUPILS IN THE CLASS? 25
- WHAT TYPE OF GRAPH IS THIS CALLED? BAR GRAPH

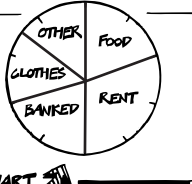
A GARDENER HAS 40 HECTARES OF LAND PLANTED WITH VEGETABLES. A PIE CHART SHOWS HIS CROPS.



- WHAT IS $\frac{1}{8}$ OF 40? 5
- HOW MANY HECTARES OF BEANS IS HE GROWING? 5
- HOW MANY HECTARES OF TOMATOES IS HE GROWING? 10
- HOW MANY HECTARES OF CORN IS HE GROWING? 15
- HOW MANY HECTARES OF CARROTS IS HE GROWING? 0

THE TOPP FAMILY INCOME IS SPENT AS FOLLOWS:

- 20% FOOD
- 30% RENT
- 15% CLOTHES
- 20% BANKED
- 15% OTHER



USE THESE FIGURES TO MAKE A PIE CHART

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 26 + 28 &= 54 \\ 25 - 17 &= 8 \\ 24 \times 10 &= 240 \\ 27 \div 9 &= 3 \\ 23 + 24 &= 47 \\ 29 - 22 &= 7 \\ 21 \times 12 &= 252 \\ 22 \div 11 &= 2 \\ 28 - 13 &= 15 \\ 38 - 29 &= 9 \end{aligned}$$



FANTASTIC FRACTIONS

$$\begin{aligned} \frac{1}{3} \text{ OF } 3 &= 1 \\ \frac{1}{3} \text{ OF } 9 &= 3 \\ \frac{1}{3} \text{ OF } 21 &= 7 \\ \frac{1}{4} \text{ OF } 4 &= 1 \\ \frac{1}{4} \text{ OF } 12 &= 3 \\ \frac{1}{5} \times \frac{25}{5} &= \frac{25}{5} \\ \frac{1}{5} \times \frac{12}{5} &= \frac{12}{25} \\ \frac{1}{5} \times \frac{13}{77} &= \frac{13}{385} \\ \frac{1}{5} \times \frac{9}{9} &= \frac{9}{45} \\ \frac{1}{5} - \frac{2}{9} &= \frac{9-10}{45} = -\frac{1}{45} \end{aligned}$$

MIGHTY METRICS

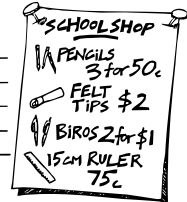
$$\begin{aligned} 30 \text{ g} + 90 \text{ g} &= 120 \text{ g} \\ 64 \text{ g} + 46 \text{ g} &= 110 \text{ g} \\ 22 \text{ l} - 12 \text{ l} &= 10 \text{ l} \\ 58 \text{ l} - 29 \text{ l} &= 29 \text{ l} \\ 1200 \text{ m} &= 1.2 \text{ km} \\ 1567 \text{ m} &= 1.567 \text{ km} \\ 4000 \text{ mg} &= 4 \text{ g} \\ 4200 \text{ mg} &= 4.2 \text{ g} \\ 200 \text{ cm} &= 2 \text{ m} \\ 234 \text{ cm} &= 2.34 \text{ m} \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 365 \text{ DAYS IN 1 YEAR} \\ 24 \text{ HOURS} &= 1 \text{ DAY} \\ 1.7 + 1.8 &= 3.5 \\ 2.4 - 1.6 &= 0.8 \\ 0.5 \times 3 &= 1.5 \\ 1.5 \div 5 &= 0.3 \\ 48, 24, 12, 6 \\ 1234 + 4321 &= 5555 \\ 777 - 555 &= 222 \\ 10^2 &= 100 \end{aligned}$$

THE QUINTUS QUIZ

- FIND THE COST OF...
- 12 FELT TIPS \$24
 - 30 PENCILS \$5
 - 20 RULERS \$15
 - 10 BIROS \$5
 - 15 FELT TIPS & 10 BIROS \$35



136 ↔ 137
138 ↔ 139

- COMMON TABLES

- COMPLETE THIS TIMESTABLE!



X	10	11	12	13	14	15	20	50	100
1	10	11	12	13	14	15	20	50	100
2	20	22	24	26	28	30	40	100	200
3	30	33	36	39	42	45	60	150	300
4	40	44	48	52	56	60	80	200	400
5	50	55	60	65	70	75	100	250	500
6	60	66	72	78	84	90	120	300	600
7	70	77	84	91	98	105	140	350	700
8	80	88	96	104	112	120	160	400	800

TABLES COME IN ALL SORTS OF FORMS!

DO YOU KNOW YOUR SCHOOL TIMETABLE?

FILL IT IN BELOW!

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
1						
2						
3						
4						
5						
6						

CAN YOU THINK OF ANY OTHER TABLES YOU COME ACROSS EVERYDAY?

- 1 BUS OR TRAIN 2 TV PROGRAMME 3 SHOP HOURS

LET'S GO ROLLER SKATING WITH... DIVINE DIANNE THE DIVIDING DOORMOUSE!



- NOW DIANNE THOUGHT SKATING WOULD BE LIKE DIVISION - EASY!

THE TIMETABLE AT DI'S LOCAL RINK

DAY	SESSION TIMES	AGE	ADULT COST	JUNIOR COST	SKATE HIRE
MONDAY-THURSDAY	6pm-9pm	ANY AGE	\$7.00	\$4.00	\$1.00
FRIDAY AFTERNOON	4pm-6pm	UNDER 15		\$3.00	\$1.00
FRIDAY EVENING	7-15pm-9pm	ANY AGE	\$5.00	\$3.00	\$1.00
SATURDAY MORNING	9am-12noon	UNDER 15		\$3.00	\$1.00
SATURDAY AFTERNOON	1:30pm-5:15pm	ANY AGE	\$7.00	\$4.00	\$1.00

- WHICH DAYS HAVE SKATING UNTIL 9PM? MONDAY - FRIDAY
- WHEN IS SKATING FOR 'UNDER 15'S' ONLY? FRIDAY AFTERNOON & SATURDAY MORNING
- WHICH SESSION IS THE LONGEST? SATURDAY AFTERNOON
HOW LONG? 3HR 45MIN
- DI WENT ON FRIDAY AFTERNOON AT 4.45 PM. SHE COULD SKATE FOR 75 MINUTES.
- DI WENT WITH 3 FRIENDS ALL AGED 13. THEY ALL HIRED SKATES. HOW MUCH DID IT COST IN TOTAL? \$ 16
- MRS MATAI AND HER 2 CHILDREN WENT TO THE SATURDAY AFTERNOON SESSION. THEY OWN THEIR SKATES. HOW MUCH DID IT COST? \$ 15
- WHICH SESSION GIVES THE BEST VALUE FOR MONEY? ADULTS SAT AFTERNOON, JUNIORS SAT MORNING

DIANNE REMINDS SHE'LL STICK WITH DIVISION. IT LEAVES HER WITH WARM FUZZIES, NOT BRAUSEY BUMMIES!

EPI'S EXCELLENT HOLIDAY TRAVEL GUIDE

THIS TABLE SHOWS YOU THE DISTANCES IN KILOMETRES BETWEEN SOME SOUTH ISLAND TOWNS!

	WESTPORT	TIMARU	QUEENSTOWN	NELSON	MOUNT COOK	MILFORD SOUND	INNERCARGILL	GREYMOUTH	PUNEDIN	CHRISTCHURCH	BLLENHEIM	ALEXANDRA
ALEXANDRA	822	316	90	905	274	418	274	680	188	472	788	
BLLENHEIM	266	486	822	117	655	1092	921	331	690	322		
CHRISTCHURCH	339	164	498	440	333	770	587	255	366			
PUNEDIN	705	202	294	808	339	403	222	559				
GREYMOUTH	104	355	605	295	503	911	780					
INNERCARGILL	936	424	194	1029	475	266						
MILFORD SOUND	1016	604	278	1211	594							
MOUNT COOK	599	212	286	788								
NELSON	231	603	939									
QUEENSTOWN	710	342										
TIMARU	502											
WESTPORT												



HOW FAR IS IT FROM...

BLLENHEIM TO CHRISTCHURCH 322 km TIMARU TO WESTPORT 502 km
 MT. COOK TO ALEXANDRA 274 km ALEXANDRA TO NELSON 905 km
 NELSON TO GREYMOUTH 295 km GREYMOUTH TO BLLENHEIM 331 km

EPI AND POLLY GO ON A BUS TOUR FROM CHRISTCHURCH TO GREYMOUTH, ON TO ALEXANDRA AND TIMARU, THEN BACK TO CHRISTCHURCH. HOW FAR DID THEY TRAVEL?
255+660+316+164 = 1395 km

IS IT QUICKER TO TRAVEL FROM NELSON TO PUNEDIN VIA CHRISTCHURCH OR GREYMOUTH? 806 V 854 Go via Christchurch

THE FINAL JOURNEYS!

WESTPORT IS 104 km FROM GREYMOUTH
 ALEXANDRA IS 418 km FROM MILFORD SOUND
 CHRISTCHURCH IS 339 km FROM WESTPORT

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

11 + 19 = 30 15 - 8 = 7
 20 - 15 = 5 30 + 12 = 42
 3 x 21 = 63 28 ÷ 4 = 7
 56 + 12 = 68 15 + 19 = 34
 74 - 36 = 38 70 ÷ 5 = 14
 44 - 27 = 17 2 x 25 = 50
 2 x 140 = 280 100 ÷ 20 = 5
 150 ÷ 5 = 30 100 - 80 = 20
 63 ÷ 3 = 21 60 + 34 = 94
 109 + 5 = 114 150 x 2 = 300

TRENDY TABLES

9 x 4 = 36
 9 x 7 = 63
 9 x 11 = 99
 9 x 9 = 81
 9 x 5 = 45
 9 x 8 = 72
 9 x 12 = 108
 9 x 6 = 54
 9 x 3 = 27
 9 x 13 = 117

SILLY SEQUENCES

COMPLETE THE SEQUENCES AND WORK OUT THE TOTALS OF EACH ROW & COLUMN!

1	3	5	7	9	11	13	15	17	19	21	121
1	4	7	10	13	16	19	22	25	28	31	176
1	5	9	13	17	21	25	29	33	37	41	231
1	6	11	16	21	26	31	36	41	46	51	286
1	7	13	19	25	31	37	43	49	55	61	341
1	8	15	22	29	36	43	50	57	64	71	396
6	33	60	87	114	141	168	195	222	249	276	

TOTAL OF ROWS



TOTAL OF EACH COLUMN

- WHAT IS THE PATTERN IN THE LAST COLUMN? ADD TEN. ALL END IN 1
 - WHAT IS THE PATTERN IN EACH ROW TOTAL? ADD 55
 - WHAT IS THE PATTERN IN EACH COLUMN TOTAL? ADD 27

RELATIVE RELATIONS

IF = 20, FIND THE VALUE OF EACH OF THESE



5



10



30

141 ↔ 143
 144 ↔ 145

GET INTO GEAR FOR SOME... RACEWAY MATHS!

123	65	273	463	413	
243	373	677	840	909	
115	400	189	406	286	
481	838	1109	1709	1608	
342	212	119	313	511	
153	567	400	694	143	
265	658	589	507	349	
104	896	779	899	77	
864	2333	1887	2413	1100	
322	420	243	463	342	
-115	-240	-144	-265	-258	
207	180	99	198	84	
524	637	505	705	243	
-236	-548	-377	-248	-67	
288	89	128	457	176	
23	24	55	44	22	45
x 3	x 5	x 2	x 4	x 6	x 5
69	120	110	176	132	225
79	118	155	67	811	910
2)158	3)354	4)620	5)335	6)4866	7)6370
990	909	1101	469	12757	
10)9900	9)8181	8)8808	7)3283	6)76542	

DO-DA-CRAZY DECIMAL SQUARES!

+	2.9	7.2	10.5
0.3	3.2	7.5	10.8
0.8	3.7	8	11.3
1.6	4.5	8.8	12.1
x	0.2	0.9	1.2
6	12	54	72
0.1	0.02	0.09	0.12
0.5	0.1	0.45	0.6

"SOMETIMES ACCURACY IS BETTER THAN SPEED!"
 DID YOU GET THE COURSE RECORD?

ARITHMETIC APTITUDE

USE YOUR NUMBER SKILLS TO FILL IN EACH GAP TO COMPLETE THE EQUATIONS BELOW!

12 + 6 = 15 + 3 (3 + 8) - 4 = 7 13 + 8 = 8 + 13
 16 + 5 = 14 + 7 (7 + 9) + 4 = 20 36 - 0 = 20 + 16
 15 + 0 = 9 + 6 (9 - 3) + 9 = 15 9 + 9 = 10 + 8
 4 + 20 = 18 + 6 (12 + 3) - 8 = 7 6 + 45 = 40 + 11
 8 + 9 = 9 + 8 (12 - 8) + 3 = 7 16 + 0 = 10 + 6

NOW WRITE X OR IN EACH Δ TO MAKE TRUE SENTENCES!

6 X 3 = 18 24 X 2 = 48 8 X 9 = 72
 4 X 9 = 36 70 ÷ 7 = 10 6 ÷ 6 = 1
 18 ÷ 6 = 3 60 X 10 = 600 36 ÷ 9 = 4
 20 X 5 = 100 50 ÷ 5 = 10 48 X 2 = 96

COMPLETE THESE NUMBER SENTENCES

100 - 10 = 9 x 10 (4 x 6) + 6 = 30
 16 + 4 = 10 + 10 3 x 2 x 5 = 30 (3 x 7) - 8 = 13
 3 x 9 = 22 + 5 (12 ÷ 6) ÷ 2 = 1 (6 x 6) + 7 = 43
 26 - 8 = 10 + 8 12 ÷ (6 ÷ 2) = 4 (4 x 8) + 9 = 41
 19 + 7 = 30 - 4 8 x (2 + 7) = 72 (7 x 8) - 7 = 49
 48 ÷ 8 = 3 + 3 (8 x 2) + 7 = 23 (6 x 5) + 8 = 38
 42 ÷ 7 = 9 - 3 20 - 4 = 8 x 2 (5 x 9) - 5 = 40

... AND FINALLY

x	5	10	15	20
7	35	70	105	140
12	60	120	180	240
20	100	200	300	400

+	13	46	78	119
25	38	71	103	144
52	65	98	130	171
87	100	133	165	206



HEY, WORK POSITIVELY!

THE MAGICAL MIND READER

COPY THE FOLLOWING ONTO 6 CARDS. SHOW THEM TO A FRIEND. ASK THEM TO SELECT ONE NUMBER FROM ANY CARD. NOW GET THEM TO TELL YOU WHICH CARDS THEIR NUMBER APPEARS ON. ADD TOGETHER THE NUMBER ON THE TOP LEFT HAND CORNER OF THOSE CARDS. THE TOTAL WILL BE YOUR FRIEND'S NUMBER!

1	3	5	7	9	11	13	15
7	19	21	23	25	27	29	31
33	35	37	39	41	43	45	47
49	51	53	55	57	59	61	63

CARD A

2	3	6	7	10	11	14	15
18	19	22	23	24	27	30	31
34	35	38	39	42	43	46	47
50	51	54	55	58	59	62	63

CARD B

4	5	6	7	12	13	14	15
20	21	22	23	28	29	30	31
36	37	38	39	44	45	46	47
52	53	54	55	60	61	62	63

CARD C

8	9	10	11	12	13	14	15
24	25	26	27	28	29	30	31
40	41	42	43	44	45	46	47
56	57	58	59	60	61	62	63

CARD D

16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

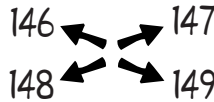
CARD E

32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

CARD F

AS AN EXAMPLE TRY 41

$$1+8+32=41$$



WHIZZ-KIDS WORKSHEET 25

NIFTY NUMBERS

$$\begin{aligned} 5+27 &= 32 & 15-7 &= 8 \\ 20-12 &= 8 & 40 \div 8 &= 5 \\ 68+9 &= 77 & 81 \div 9 &= 9 \\ 92-11 &= 81 & 49 \div 7 &= 7 \\ 7 \times 45 &= 315 & 36 \div 6 &= 6 \\ 18 \times 6 &= 108 & 45+45 &= 90 \\ 300 \div 60 &= 5 & 90 \div 2 &= 45 \\ 200 \div 200 &= 1 & 100 \div 4 &= 25 \\ 3 \times 24 &= 72 & 3 \times 36 &= 108 \\ 108-92 &= 16 & 105 \div 5 &= 21 \end{aligned}$$

EASY EQUATIONS

$$\begin{aligned} 20 &= 4 \times 5 \\ 24 \div 4 &= 6 \\ 12 \times 2 &= 8 \times 3 \\ 5 \times 3 &= 15 \times 1 \\ 20 \div 4 &= 6 \times 4 \\ 38 \div 2 &= 15 + 4 \\ 18 - 3 &= 5 \times 3 \\ \frac{1}{2} \text{ of } 20 &= 10 \\ 12 - 4 + 4 &= 12 \\ \frac{1}{2} \text{ of } 40 &= 20 \end{aligned}$$

VISCOUS VARIABLES

$$\begin{aligned} a + a + a + a + a &= 5a \\ 4b + 2b + 3b &= 9b \\ 4x + 2x + 2y + 4y &= 6x + 6y \\ (2b + 3b) \times 4 &= 20b \\ 4y \div 2y &= 2 \\ 6x \cdot 2 &= 12x \\ 4a + 2a + 3b &= 6a + 3b \\ 5k - 5k &= 0 \\ 8c + 2c + 50c &= 60c \\ 9a \cdot 2 &= 18a \end{aligned}$$

MONEY MIXTURES

COST OF 4 ICECREAMS AT 70c EACH \$2.80
 $\frac{1}{2}$ OF \$5 \$2.50
 SPEND \$3.70, CHANGE FROM \$5 \$1.30
 $\frac{1}{2}$ kg OF RICE AT 90c/kg 45c
 \$800 + \$30 \$830
 2 SAUSAGE ROLLS AT 45c EACH 90c CHANGE FROM \$1 FOR 2 SAUSAGE ROLLS 10c

CROSS NUMBER

8	2		1	0	5
1	5				5
3		2	4	2	
		5	9	0	
6	0	0	2	1	
5	1			2	

DOWN

- 21626
- 5 × 5
- 5 × 11
- 200 + 50
- 7 × 7
- DOUBLE 101

ACROSS

- $\frac{1}{2}$ of 164
- 21 × 5
- 45 ÷ 3
- DOUBLE 121
- 500 + 90
- TRIPLE 200

DO-DA-CRAZY COIN FLIP!!

- AND LEARN ABOUT PROBABILITY!

WHEN WE FLIP A COIN...

...THE CHANCE OF HEADS COMING UP IS THE SAME AS TAILS!

THAT'S A 50-50 CHANCE WE COULD ALSO SAY THE CHANCE IS 1 OUT OF 2 OR $\frac{1}{2}$

IF YOU FLIP THE COIN 100 TIMES WHAT DO YOU THINK WILL HAPPEN? TRY IT AND SEE!

- RECORD ALL YOUR RESULTS IN THE TALLY TABLE BELOW

HEADS	TAILS

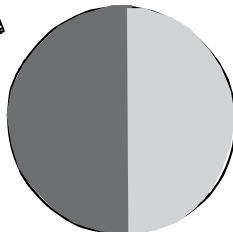
EXAMPLE ONLY

FLIP THE COIN FOR A TOTAL OF 100 TIMES. DON'T FORGET TO TALLY EACH FLIP ON THE TABLE!

WHAT HAPPENED AFTER 100 FLIPS? BOTH TOTALS ARE EQUAL IS THE FINAL OUTCOME "50-50"? YES
 THE PROBABILITY OF TAILS TURNING UP IS 50

DRAW YOUR RESULTS ON A PIE GRAPH.

- LIST 5 OTHER EXPERIMENTS WHICH WOULD HAVE EQUAL OUTCOMES.
- TRUE-FALSE QUESTIONS
 - YES-NO QUESTIONS
 - MALE-FEMALE BIRTHS
 - TURN LEFT OR RIGHT
 - UPSTAIRS OR DOWNSTAIRS



DICEY DILEMMA

PROBABILITY IS THE STUDY OF HOW OFTEN SOMETHING MIGHT HAPPEN. THE BEST WAY TO LEARN ABOUT PROBABILITY IS BY EXPERIMENTING. IN THIS ACTIVITY, YOU EXPERIMENT WITH DICE!

TOSS THE DIE AND RECORD THE OUTCOME IN THE TALLY TABLE REPEAT 60 TIMES!

OUTCOME	TALLY	TOTAL
1		9
2		11
3		8
4		12
5		9
6		11

WHAT PATTERNS DID YOU NOTICE?

EACH NUMBER OCCURS (CLOSE TO) THE SAME AMOUNT OF TIMES.

WHICH OUTCOME IS MOST POPULAR?

DRAW YOUR RESULTS ON A PICTOGRAPH!



TO CALCULATE PROBABILITY, $p =$

IF WE ROLLED THE DICE ONCE MORE, CALCULATE...

NUMBER OF WAYS AN EVENT CAN OCCUR
 TOTAL POSSIBLE EVENTS

$$\begin{aligned} p(\text{GETTING A ONE}) &= \text{ONE SIXTH} & p(\text{GETTING A FOUR}) &= \text{ONE SIXTH} \\ p(\text{GETTING A TWO}) &= \text{ONE SIXTH} & p(\text{GETTING A FIVE}) &= \text{ONE SIXTH} \\ p(\text{GETTING A THREE}) &= \text{ONE SIXTH} & p(\text{GETTING A SIX}) &= \text{ONE SIXTH} \end{aligned}$$

ADD ALL THESE PROBABILITIES TOGETHER. WHAT DO YOU GET? WHY? ADDING UP ALL THE PROBABILITIES YOU GET ONE. PROBABILITIES ARE ALWAYS BETWEEN 0 AND 1.

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 38 - 16 &= 22 \\ 46 + 49 &= 95 \\ 48 + 45 &= 93 \\ 53 - 27 &= 26 \\ 40 \times 11 &= 440 \\ 32 \times 4 &= 128 \\ 28 \times 7 &= 196 \\ 45 \div 9 &= 5 \\ 32 \div 8 &= 4 \\ 64 - 26 &= 38 \end{aligned}$$

DANDY DECIMALS

$$\begin{aligned} 1.6 + 1.7 &= 3.3 \\ 2.3 + 1.9 &= 4.2 \\ 2.5 + 3.5 &= 6 \\ 1.9 - 0.8 &= 1.1 \\ 2.4 - 1.6 &= 0.8 \\ 10 \times 5.61 &= 56.1 \\ 100 \times 23.4 &= 2340 \\ 43.2 \div 10 &= 4.32 \\ 69\% \text{ AS A DECIMAL IS } &0.69 \\ 9\% \text{ AS A DECIMAL IS } &0.09 \end{aligned}$$

RADICAL ROMANS

$$\begin{aligned} LII &= 52 \\ LXXV &= 75 \\ CXXV &= 125 \\ CC &= 200 \\ MM &= 2000 \\ L &= 50 \\ C &= 100 \\ CCC &= 300 \\ M &= 1000 \\ MMM &= 3000 \end{aligned}$$

26

EXTRA EXAMPLES

$$\begin{aligned} 471 + 400 &= 871 \\ 800 + 800 &= 1600 \\ 600 - 321 &= 279 \\ 700 - 490 &= 210 \\ 110 \times 5 &= 550 \\ 234 \times 10 &= 2340 \\ 432 \div 100 &= 4.32 \\ 800 \div 40 &= 20 \\ 999 + 888 &= 1887 \\ 999 - 888 &= 111 \end{aligned}$$

THE QUINTUS QUIZ

I LEFT HOME AT 8:05
IT TOOK 35 MINUTES TO
GET TO SCHOOL. SCHOOL WENT
FOR 65 HOURS. SUPPER
WAS AT 9:25 TODAY. I WAS
OUT OF BED FOR 16h15m HOURS.

-FRIDAY-
OUT OF BED 7:15
LEFT HOME 8:05
GOT TO SCHOOL 8:40
SCHOOL FINISHED 3:10
ARRIVED HOME 4:00
SUPPER TIME 9:25
INTO MY BED 11:30

INTRODUCING... THE TOPPS OF AVERAGE TOWN!



WHAT ARE THESE AVERAGES WE OFTEN USE?

- = **MODE** THE MOST COMMON DATA
- = **MEDIAN** THE MIDDLE NUMBER WHEN ALL ARE PLACED IN ORDER
- = **MEAN** THE SUM OF THE DATA DIVIDED BY HOW MANY THERE ARE
- = **RANGE** TAKE THE LARGEST DATA AND SUBTRACT THE SMALLEST

THE TOPPS FAMILY STATISTICS

WHO	AGE	I.Q.	MASS kg
DAD TOPP	40	100	80
MUM TOPP	35	110	50
TAI TOPP	13	120	35
ANA TOPP	6	110	30
KIKI TOPP	6	110	25

MODE AGE 6 MEAN AGE 20 MEDIAN AGE 13
AGE RANGE 34 MEAN MASS 44 KG MASS RANGE 55 KG
MEDIAN MASS 35 KG MODE I.Q. 110 MEAN I.Q. 110
I.Q. RANGE 20 MEDIAN I.Q. 110 THE LIGHTEST TOPP IS KIKI

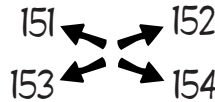
TOPP TALLIES!

TAI'S HOURS DOING HOMEWORK
LAST WEEK: 2, 4, 2, 1, 3, 0.
MODE TIME 2
MEDIAN TIME 2
MEAN TIME 2
RANGE OF TIMES 4

DAD'S GOLF SCORES LAST
YEAR WERE:
72, 66, 70, 67, 73, 68, 74
RANGE OF SCORES 8
MEDIAN SCORE 70
MEAN SCORE 70
BEST ROUND 66

... AND SOME OF YOUR OWN STATISTICS!

THE MEAN AGE OF OUR CLASS IS _____
THE MODE AGE OF OUR CLASS IS _____
THE MEDIAN TIME I SPEND SLEEPING ASK MUM!



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

$$\begin{aligned} 17 - 15 &= 2 \\ 43 + 16 &= 59 \\ 19 + 17 &= 36 \\ 42 - 13 &= 29 \\ 13 \times 8 &= 104 \\ 7 \times 11 &= 77 \\ 12 \times 60 &= 720 \\ 32 \div 4 &= 8 \\ 84 \div 12 &= 7 \\ 37 + 24 &= 61 \end{aligned}$$

MONEY MIXTURES

$$\begin{aligned} 48c + 17c &= 65c \\ 48c - 17c &= 31c \\ 4 \times 30c &= \$120 \\ 25c + 60c + 24c &= \$109 \\ \$2 + \$3 + \$12 &= \$17 \\ \text{HOW MANY 10c COINS MAKE } \$9? &90 \\ \text{HOW MANY 20c COINS MAKE } \$4? &20 \\ 56c + 28c &= 84c \\ 56c - 28c &= 28c \\ \$1.32 + \$2.31 &= \$3.63 \end{aligned}$$

VISCIOUS VARIABLES

$$\begin{aligned} a + a + a &= 3a \\ b + 2b &= 3b \\ 3c + 4c &= 7c \\ 5d + 7d &= 12d \\ 2e - e &= e \\ 14f - 4f &= 10f \\ 10g - 5g &= 5g \\ 6h + 2h &= 8h \\ 17i + 7i &= 24i \\ 6j - 6j &= 0 \end{aligned}$$

EXTRA EXAMPLES

$$\begin{aligned} 500 + 216 &= 716 \\ 180 - 94 &= 86 \\ 8 \times 60 &= 480 \\ 20 \times 100 &= 2000 \\ 800 \div 16 &= 50 \\ 203 + 302 &= 505 \\ 415 - 310 &= 105 \\ 210 \div 7 &= 30 \\ 324 + 177 &= 501 \\ 423 - 222 &= 201 \end{aligned}$$

THE QUINTUS QUIZ

- HOW MANY DAYS IN NOVEMBER? 30
- WHAT DAY IS OCTOBER 29th? TUES
- WHAT DATE IS THE FIRST FRIDAY OF OCTOBER? 4TH
- WHAT DATE IS THE FOURTH SUNDAY OF NOVEMBER? 24TH
- HOW MANY THURSDAYS IN OCTOBER? 5

OCTOBER						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

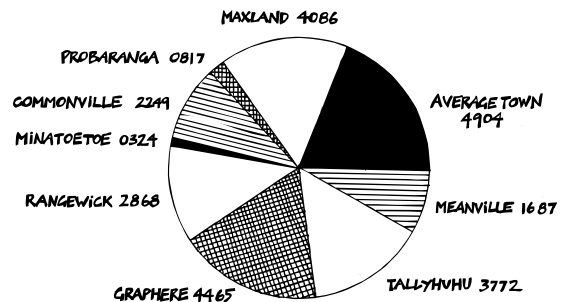
NOVEMBER						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

27
WKL

"ROUND-UP-TIME!"

12 MAY BE ROUNDED DOWN \approx 10
99 MAY BE ROUNDED UP \approx 100. GET IT!

-A BREAKDOWN OF CRIME FIGURES IN STATISTIC CITY



SUBURB	NUMBER OF CRIMES		
	TO THE NEAREST 10	TO THE NEAREST 100	TO THE NEAREST 1000
MAXLAND	4090	4100	4000
AVERAGE TOWN	4900	4900	5000
MEANVILLE	1690	1700	2000
TALLYHUHU	3770	3800	4000
GRAPHERE	4470	4500	4000
RANGEWICK	2870	2900	3000
MINATOETOE	320	300	0
COMMONVILLE	2250	2200	2000
PROBARANGA	820	800	1000
TOTALS	25180	25200	25000

ADD ALL THE ACTUAL CRIME FIGURES 25172
WHICH APPROXIMATION TOTAL IS CLOSEST TO THIS? NEAREST 10

... AND CRIMES SOLVED...

SUBURBS	PERCENTAGE OF CRIMES SOLVED		
	ACTUAL	TO 1 DECIMAL PLACE	TO NEAREST WHOLE NUMBER
MAXLAND	42.61	42.6	43
AVERAGE TOWN	38.383	38.4	38
MEANVILLE	41.75	41.8	42
TALLYHUVHU	34.92	34.9	35
GRAPHERE	33.166	33.2	33
RANGEWICK	35.50	35.5	36
MINATOETOE	37.27	37.3	37
COMMONVILLE	43.44	43.4	43
PROBARANGA	39.89	39.9	40
OVERALL	1.38.5	38.5	39

- TO FIND THE OVERALL % OF CRIMES SOLVED YOU HAVE TO:

- ADD THE FIGURES
 - DIVIDE THE TOTAL BY NINE
- WRITE YOUR ANSWER IN POSITION 1.

NOW ORDER YOUR LUNCH FROM THE POLICE CANTEEN - ROUND ALL PRICES TO THE NEAREST 5c.

Y U M M E E
70 80 85 85 75 75

- in -

M Y
85 70

T U M M Y!
90 80 85 85 70

POLICE CANTEEN

- SANDWICH - 78c
- PIE 83c
- CAKE 72c
- DRINK 74c
- ROLL 89c

155 ↔ 157
158 ↔ 159

WHIZZ-KIDS WORKSHEET 28

NIFTY NUMBERS

$$25 - 21 = 4$$

$$34 + 35 = 69$$

$$91 + 12 = 103$$

$$36 - 29 = 7$$

$$15 \times 7 = 105$$

$$8 \times 20 = 160$$

$$10 \times 32 = 320$$

$$44 \div 11 = 4$$

$$64 \div 8 = 8$$

$$100 \div 25 = 4$$

TRENDY TABLES

$$12 \times \frac{1}{2} = 12$$

$$12 \times \frac{2}{2} = 24$$

$$12 \times 3 = 36$$

$$12 \times 4 = 48$$

$$12 \times 5 = 60$$

$$12 \times 7 = 84$$

$$12 \times 8 = 96$$

$$12 \times 10 = 120$$

$$12 \times 0 = 0$$

$$12 \times 11 = 132$$

SOFT SUBSTITUTES

$$a = 25, a + 8 = 33$$

$$b = 34, b + 11 = 45$$

$$c = 46, c + 23 = 69$$

$$d = 62, 7 + d = 69$$

$$e = 31, 14 + e = 45$$

$$r = 48, 17 + r = 65$$

$$s = 50, 29 + s = 79$$

$$t = 54, t - 30 = 24$$

$$u = 20, u - 14 = 6$$

$$v = 40, 3v = 120$$

EXTRA EXAMPLES

90 SUBTRACT 48 IS 42

84 DIVIDED BY 6 IS 14

\$24 \cdot 20 \times 5 = \\$120

\$36 \cdot 85 \times 20 = \\$737

1234 = 1000 + 200 + 30 + 4

2806 + 708 = 3514

4091 = 4000 + 0 + 90 + 1

3456 + 6543 = 9999

8765 - 5678 = 3087

777 + 888 = 1665

THE QUINTUS QUIZ

- FIND THE COST FOR...

- 1 ADULT & 1 CHILD \$4.50
- 2 ADULTS & 2 CHILDREN \$9
- 4 ADULTS & 1 CHILD \$16.50
- 1 ADULT & 3 CHILDREN \$5.50
- 3 ADULTS & 10 CHILDREN \$17



CIRCLE PARTS!

COMPLETE THE STATEMENTS BELOW USING THE CIRCLE DIAGRAM. PUT THE LETTER ABOVE THE CORRECT ANSWER IN THE CODE!

- H** A LINE THAT ONLY TOUCHES A CIRCLE AT ONE POINT TANGENT
- L** A DIAMETER IS TWICE THE RADIUS
- C** LINE AB IS CALLED A CHORD
- H** THE DISTANCE AROUND A CIRCLE CIRCUMFERENCE
- R** IF OD IS 20MM, THEN ED IS 40 MM
- F** A CHORD THAT PASSES THROUGH A CIRCLE'S CENTRE DIAMETER
- E** POINTS A, B, C, D AND E ARE ALL THE SAME DISTANCE FROM THE CENTRE
- V** HALF A CIRCLE IS A SEMICIRCLE
- T** THE SHADED AREA EOC IS CALLED A SECTOR
- E** PART OF A CIRCLE e.g. THE POINTS BETWEEN A AND B ARC

WHAT DO YOU CALL A MILLIONAIRE WHO NEVER WASHES?

F	I	L	T	H	Y	R	I	C	H
DIAMETER	DISTANCE	TWICE	SECTOR	TANGENT	SEMICIRCLE	40MM	ARC	CHORD	CIRCUMFERENCE

PARTS-N-CIRCLES

- SHOW CENTRE, O
- SHOW RADIUS, r
- SHOW DIAMETER, D
- SHOW CIRCUMFERENCE, C
- SHOW A CHORD
- SHOW A TANGENT
- SHOW AN ARC
- SHOW A SEGMENT
- THIS RADIUS MUST = 10mm. DRAW A CIRCLE RADIUS = 10MM
- DRAW A SEMICIRCLE
- DRAW A SECTOR
- SHOW CONCENTRIC POINTS
- DRAW A TRIANGLE WHICH JUST FITS INSIDE
- DRAW AN ANGLE IN A SEMICIRCLE
- DRAW A QUARTER CIRCLE
- DRAW A QUADRILATERAL WHICH JUST FITS INSIDE

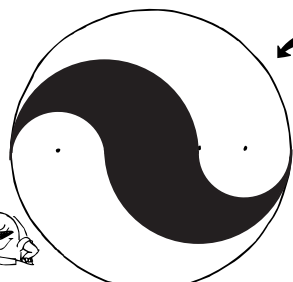
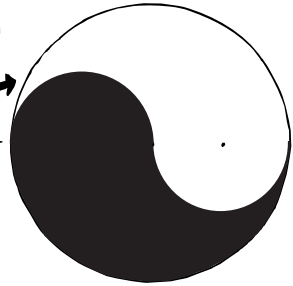


BETTY'S BRILLIANT CIRCLE DESIGNS!

1
FIRST MEASURE THE DIAMETER OF THIS CIRCLE
 $d = 83 \text{ mm}$

NEXT DRAW 2 CIRCLES INSIDE USING $\frac{1}{2}$ THIS DIAMETER

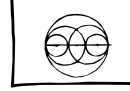
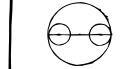
NOW COLOUR IN CAREFULLY TO MAKE...
(RUB OUT ANY EXTRA LINES!)



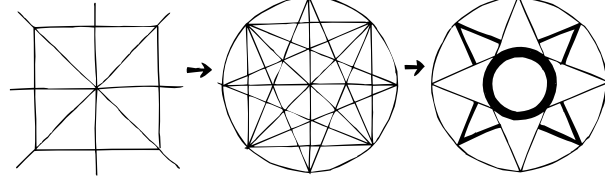
2
USING THE OTHER CIRCLE DRAW 2 SMALL CIRCLES INSIDE.

NOW DRAW 2 LARGER CIRCLES TO MAKE...

NEXT COLOUR IN TO GET...



ANOTHER DESIGN YOU MIGHT CONSTRUCT & COLOUR



160 ↔ 162
167 ↔ 168

WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

- $45 - 24 = 21$
- $37 + 38 = 75$
- $53 - 46 = 7$
- $62 + 52 = 114$
- $30 \times 12 = 360$
- $42 \times 5 = 210$
- $36 \div 9 = 4$
- $55 \div 11 = 5$
- $27 \times 6 = 162$
- $68 - 19 = 49$

FANTASTIC FRACTIONS

- $\frac{1}{3}$ OF 6 = 2
- $\frac{1}{3}$ OF 15 = 5
- $\frac{1}{4}$ OF 8 = 2
- $\frac{1}{4}$ OF 20 = 5
- $\frac{1}{5}$ OF 40 = 8
- $\frac{1}{6}$ OF 36 = 6
- $\frac{1}{7}$ OF 49 = 7
- $\frac{1}{8}$ OF 64 = 8
- $\frac{1}{9}$ OF 81 = 9
- $\frac{1}{10}$ OF 100 = 10

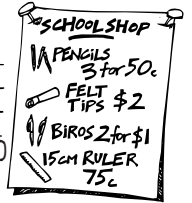
MIGHTY METRICS 29 EXTRA EXAMPLES

- $310 \text{ m} + 240 \text{ m} = 550 \text{ m}$
- $146 \text{ m} - 58 \text{ m} = 88 \text{ m}$
- $456 \text{ g} + 354 \text{ g} = 810 \text{ g}$
- $231 \text{ g} - 85 \text{ g} = 146 \text{ g}$
- $527 \text{ l} + 386 \text{ l} = 913 \text{ l}$
- $394 \text{ l} - 159 \text{ l} = 235 \text{ l}$
- $6500 \text{ m} = 6.5 \text{ km}$
- $6750 \text{ m} = 6.75 \text{ km}$
- $931 \text{ cl} = 931 \text{ l}$
- $960 \text{ cl} = 9.6 \text{ l}$

- 31 DAYS IN JULY
- 12 MONTHS = 1 YEAR
- $3.3 + 7.7 = 11$
- $3.6 - 2.8 = 0.8$
- $0.6 \times 5 = 3$
- $2.4 \div 6 = 0.4$
- 20, 19, 17, 14, 10
- $8080 + 808 = 8888$
- $456 - 265 = 191$
- $2^3 = 8$

THE QUINTUS QUIZ

- FIND THE COST OF...
- 100 RULERS \$75
 - 100 BIROS \$50
 - 20 FELT TIPS & 30 PENCILS \$45
 - 50 BIROS & 100 FELT TIPS \$225
 - 50 RULERS & 300 PENCILS \$87.50



WHIZZ-KIDS WORKSHEET!

NIFTY NUMBERS

- $19 - 6 = 13$
- $3 + 19 = 22$
- $20 - 14 = 6$
- $4 \times 13 = 52$
- $55 \div 5 = 11$
- $104 - 10 = 94$
- $3 \times 90 = 270$
- $210 \div 7 = 30$
- $28 \div 2 = 14$
- $18 + 27 = 45$
- $14 \times 5 = 70$
- $9 \times 9 = 81$
- $15 + 8 = 23$
- $26 \div 2 = 13$
- $20 \times 5 = 100$
- $106 + 8 = 114$
- $100 \div 10 = 10$
- $30 \times 5 = 150$
- $20 \times 2 = 40$
- $18 + 15 = 33$

TELLING TABLES

- $11 \times 3 = 33$
- $11 \times 7 = 77$
- $11 \times 9 = 99$
- $11 \times 11 = 121$
- $11 \times 5 = 55$
- $11 \times 8 = 88$
- $11 \times 10 = 110$
- $11 \times 12 = 132$
- $11 \times 4 = 44$
- $11 \times 6 = 66$



VISCOUS VARIABLES

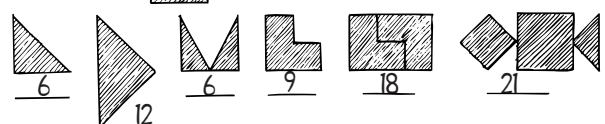
- $y + 2y + 5y = 8y$
- $5c + 3c + 8c = 16c$
- $9d - 8d = d$
- $5p + 2p + 8p = 15p$
- $10e + 5e - 3e = 12e$
- $2f + 20f - 6f = 16f$
- $2g \cdot 5 = 10g$
- $3x \cdot 4x = 12x^2$
- $3y \div 3y = 1$
- $8y \div 4 = 2y$

MIGHTY METRICS

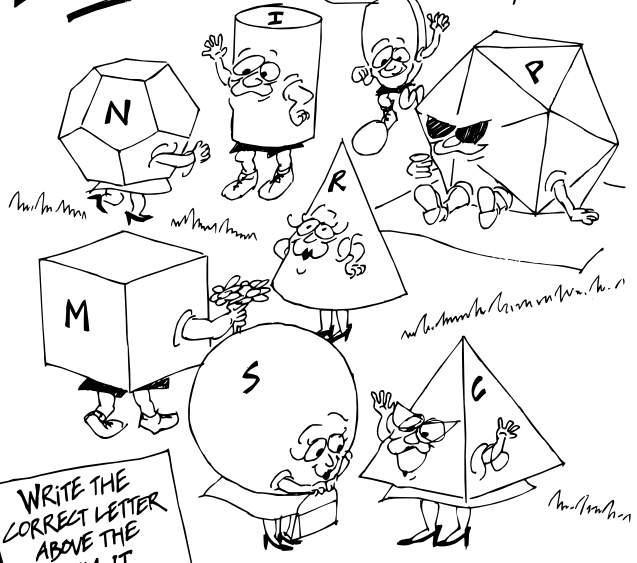
- 20 MINUTES AFTER 10:55 AM 11:15 AM
- WHAT IS HALFA CIRCLE CALLED SEMI CIRCLE
- DIAMETER = 11cm. RADIUS = 5.5 cm
- 100 YEARS = 10 DECADES
- HOW MANY MINUTES BETWEEN 2:35 PM AND 3:20 PM 45
- MINUTES IN 4 HOURS 240
- 10 LITRES OF PETROL AT \$1.10 PER LITRE COSTS \$11

RELATIVE RELATIONS

If = 12, WHAT IS THE VALUE OF...



PARTY TIME



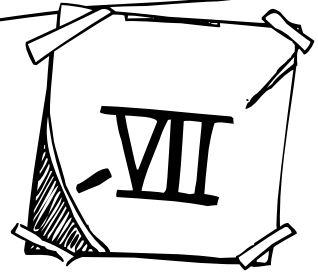
WRITE THE CORRECT LETTER ABOVE THE PRISM IT REPRESENTS!

P	R	I	S	M		P	I	C	N	I	C
ICOSAHEDRON	CONE	CYLINDER	SPHERE	CUBE		ICOSAHEDRON	CYLINDER	PYRAMID	DODECAHEDRON	CYLINDER	PYRAMID

PAGE 7

- TRY AND FILL
THE WHOLE
PAGE!

During the year collect all the examples you can from newspapers and magazines, of the number SEVEN.
Stick them to this page.





During the year collect all the examples you can from newspapers and magazines, of ANY number. Stick them to this page.

PROBLEM TIME

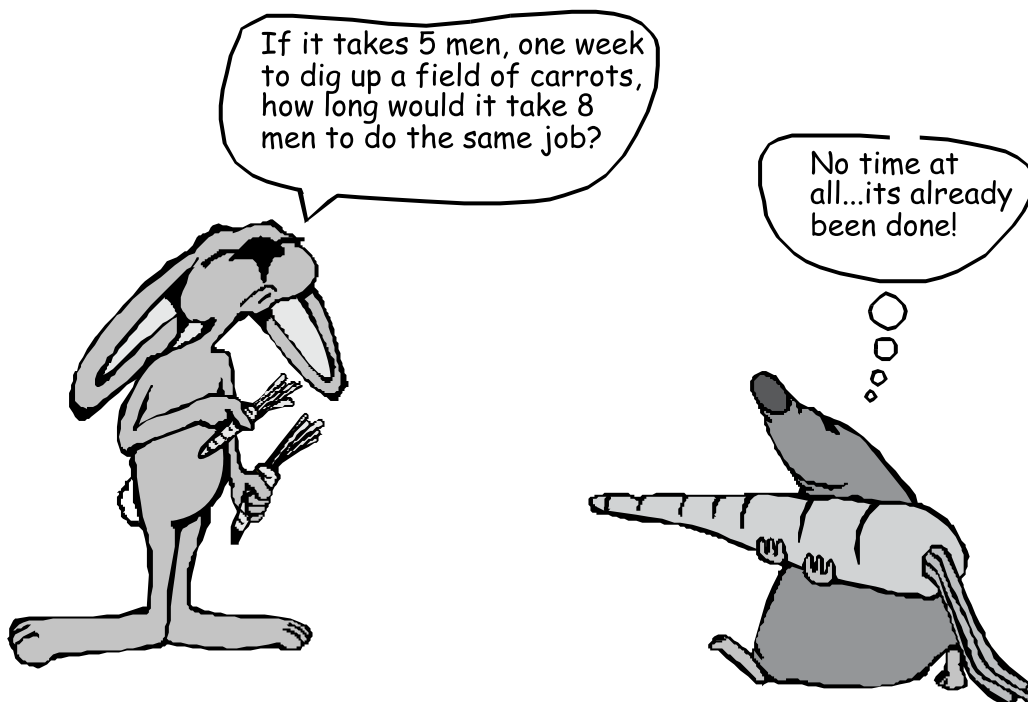
$$\begin{array}{r} \$30 \begin{array}{l} \nearrow \\ \rightarrow \\ \searrow \\ \swarrow \end{array} \begin{array}{l} \$10 - \$1 = \$9 \\ \$10 - \$1 = \$9 \\ \$10 - \$1 = \$9 \\ ??? \\ \hline \$27 \\ + \$2 \\ \hline \$29 \end{array} \end{array}$$

The \$30 Meal

Three mathematicians share a meal at a restaurant and split the bill. The waiter charges them \$30, and they pay \$10 each.

However, the waiter comes back afterwards and says he has overcharged them and the bill should have only been \$25. Of the \$5 they are owed, they agree to take \$1 each and tip the waiter the remaining \$2 to thank him for his honesty. They have now each paid \$9 for the meal.

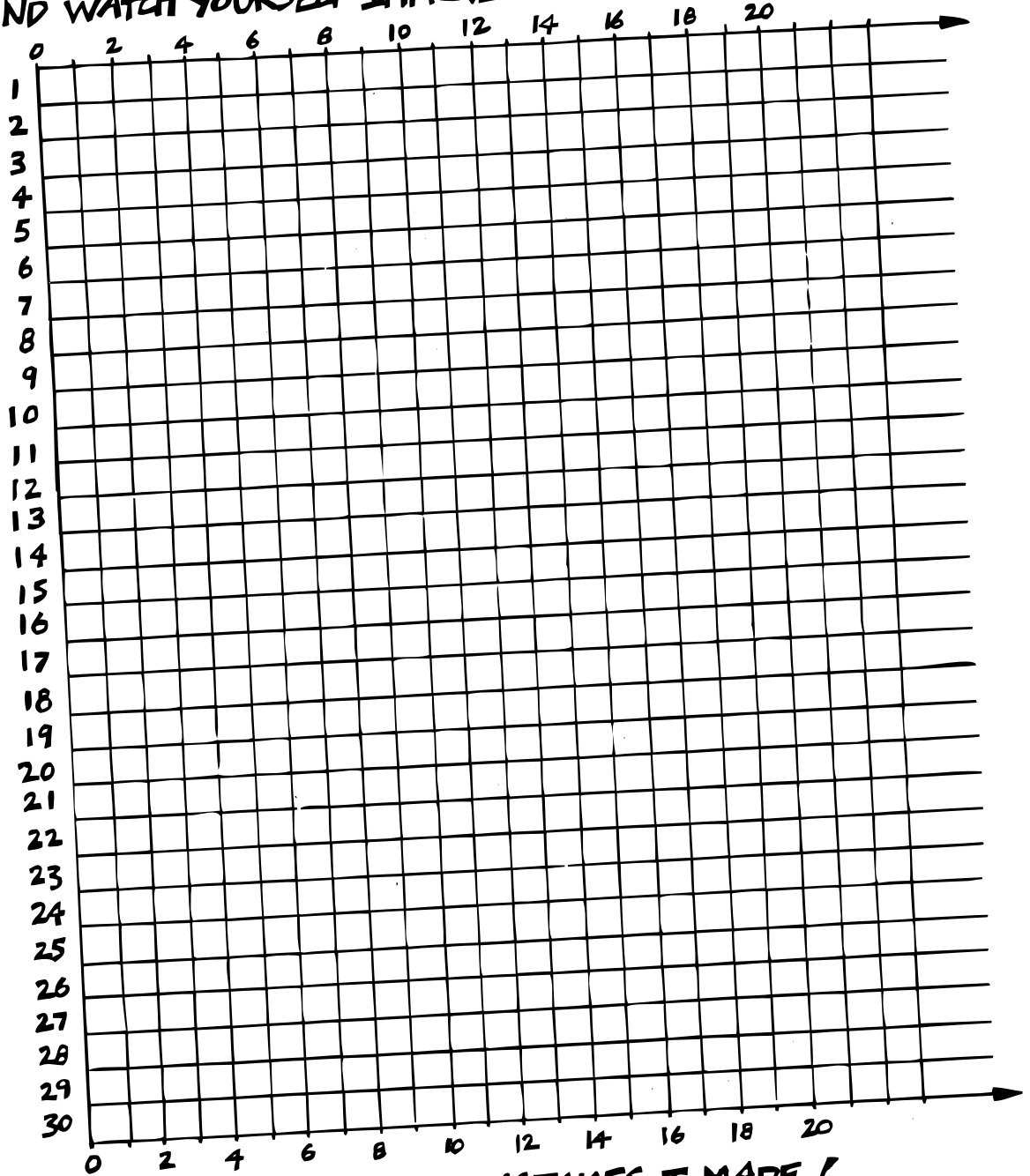
To sum up - the mathematicians originally paid \$30. They each end up paying \$9 each, $3 \times \$9 = \27 , add the \$2 which the waiter received and you get \$29. Where did the extra dollar go?



THE WHIZZ-KIDS WORKSHEET



GRAPH THE NUMBER OF MISTAKES YOU MADE ON EACH W.K.W.S AND WATCH YOURSELF IMPROVE THROUGH THE YEAR!



THE NUMBER OF MISTAKES I MADE!

THE WHIZZ-KID WORKSHEET NUMBER

- I HAVE:
- IMPROVED TO GENIUS LEVEL
 - MADE STEADY PROGRESS
 - GONE DOWN THE GURGLER... BLURRP...



SIGNED _____