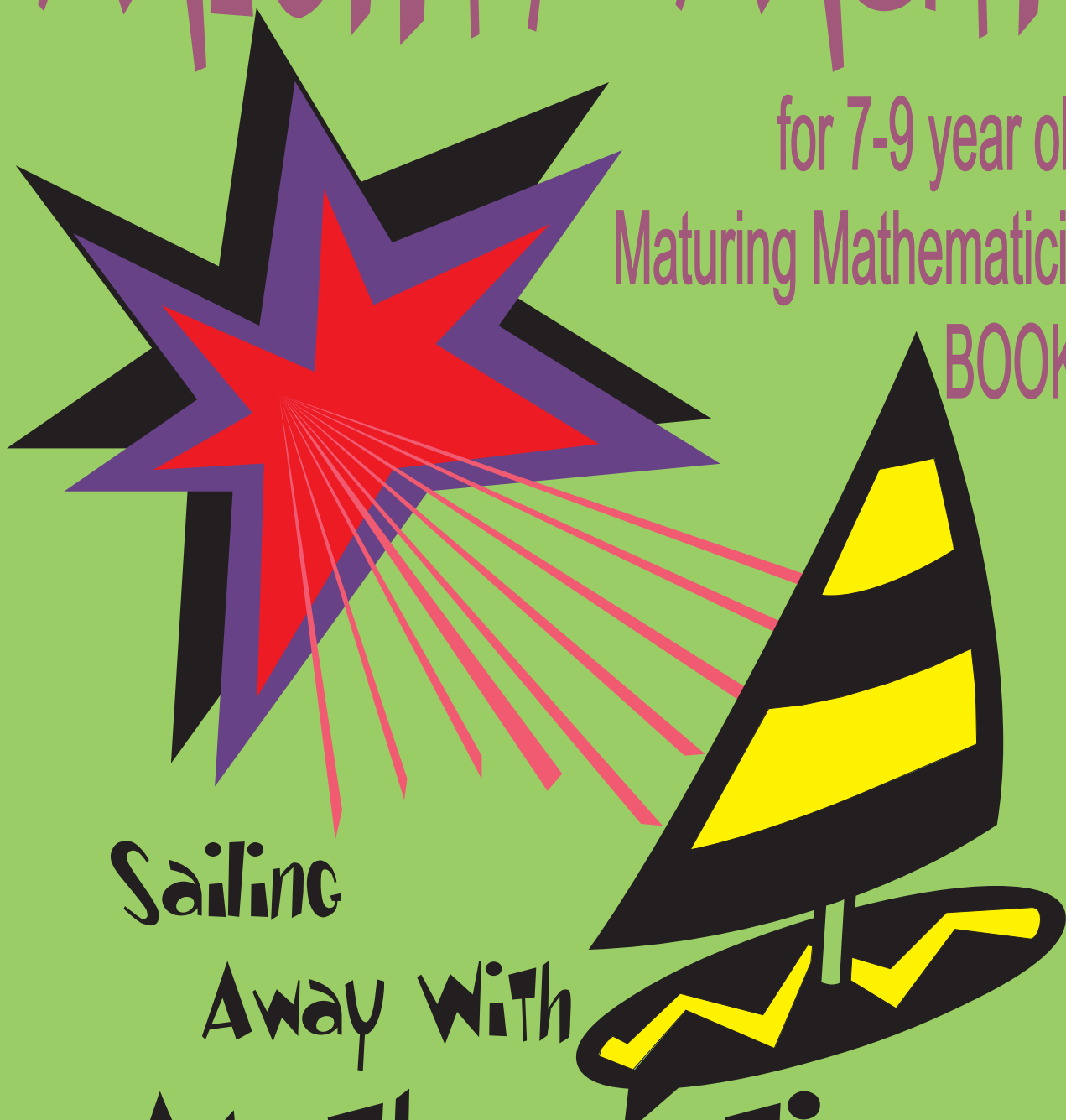


Mighty Math

for 7-9 year olds

Maturing Mathematician

BOOK 3



Sailing

Away With

Mathematics

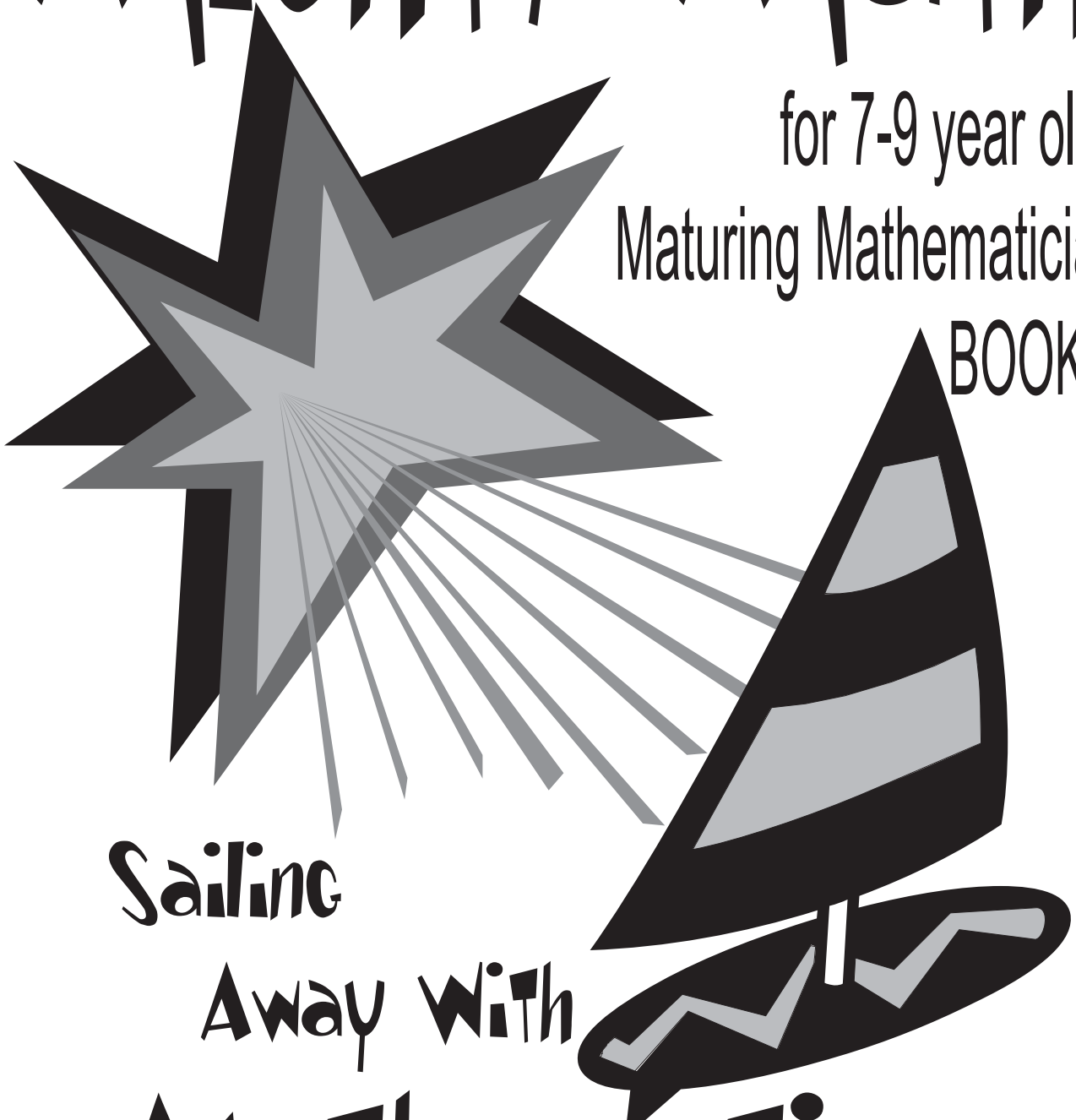
Kim Freeman

Mighty Math

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Maturing Mathematician

BOOK 3



Sailing

Away With

Mathematics

Kim Freeman

Mighty Math Maturing Mathematician Book 3, Sailing Away With Mathematics
Author, K. Freeman

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HOW CAN YOU HELP YOUR CHILD IN MATHEMATICS?

Mastering mathematics is essential for future opportunities in school and careers. Your children need to reach a certain level of competency in mathematics to be able to progress in many advanced high-school courses, and then to have a wider variety of career choices. Doing mathematics homework reinforces all the skills being learnt in class. The more time children spend practising their skills, the sooner they will develop confidence in their abilities. However don't just give this book to your children and expect them to learn by themselves. Any activity is fun when done with others or when there is reinforcement and encouragement. Praise and attention to what they are doing will help towards getting them to sit down to learn next time.

This green Mighty Maths series, *Maturing Mathematician*, reinforces and continues on with the work covered in the previous Mighty Maths series (*Beginning Mathematician*, *Developing Mathematician* and *Advancing Mathematician*). The work is progressively more challenging and new concepts are introduced in each book at various points. To help reinforce mathematical skills as well as to maintain motivation, the same type of question is asked in different ways and contexts.

This specific book covers number sequences, numbers greater than 100, arithmetic strategies, adding and subtracting with carrying, measurement and fractions.

For best results:

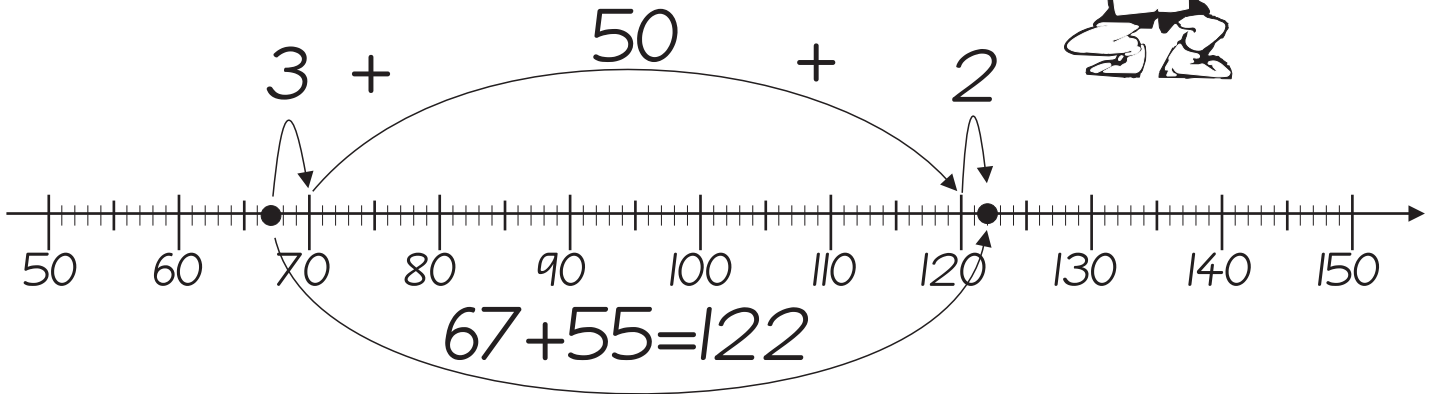
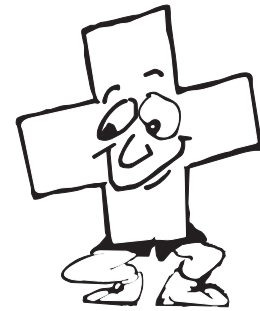
- Make sure your children understand the different concepts. Mathematics is not just a meaningless mental exercise of memorizing rules and doing rote drills. Making mathematics part of their daily lives will make it more meaningful. For example, ask them to space new plants a certain distance apart in the garden, double a recipe or use money to pay bills in stores.
- Help them to master the basic facts and learn the vocabulary of mathematics. By now, your children should be competent in the multiplication tables, and simple arithmetic. Having these basic skills and being able to understand the vocabulary means that they can move up to a higher level of learning. If they have not mastered these, use flash cards and drills to help them learn.
- Encourage your children to write neatly. Many errors in solving mathematics problems can be traced back to sloppy number writing.
- Provide help immediately when needed. Mathematics is a subject in which everything builds upon what has been previously learned. For example, a failure to understand fractions and decimals will lead to problems with percentages.

We hope that you and your children have fun with Mighty Maths. At Mahobe, we certainly had fun putting it all together for you.

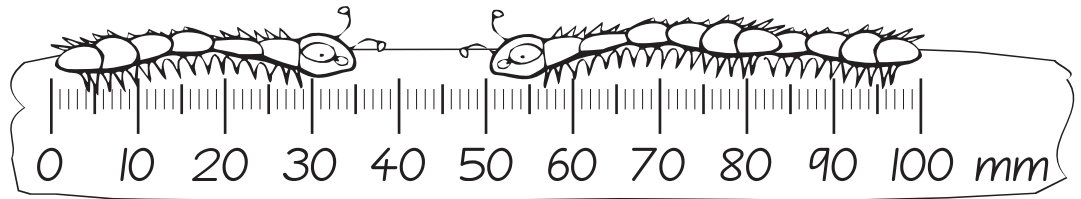
What is found in this book?

In this book you look at:

Arithmetic Strategies



Measurement

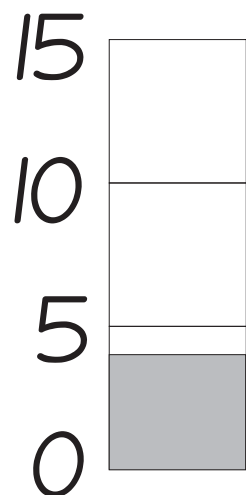


Statistics

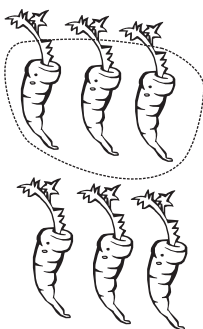


Snapper Fish

Tallies



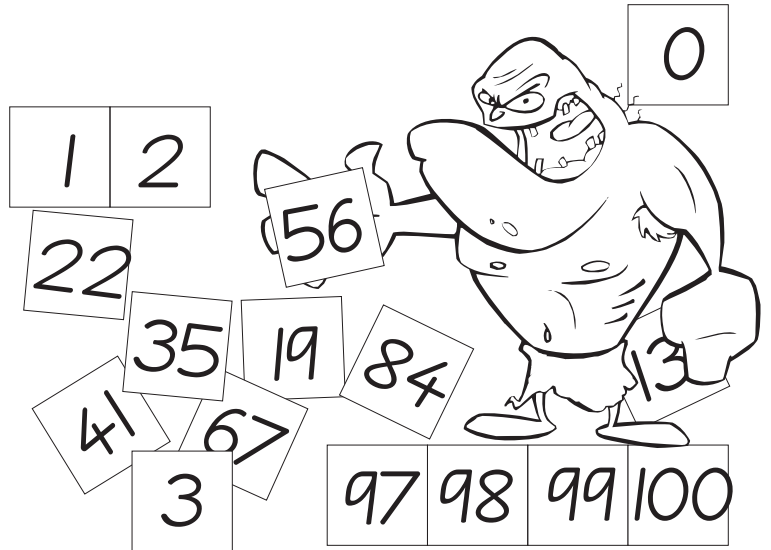
Fractions



NUMBERS

Below are pieces that come from a one hundred square.

Fill in all the blank squares.



1	2	3

21				

48		

	57			60

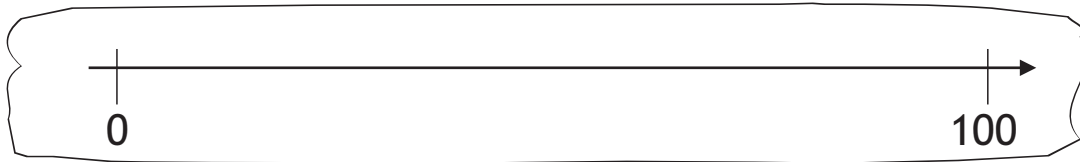
	74			

	32			

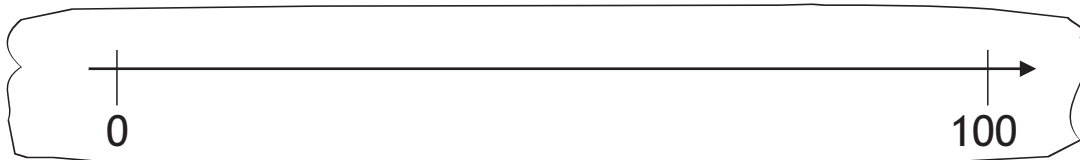
NUMBERS

Mark these numbers on the number line.

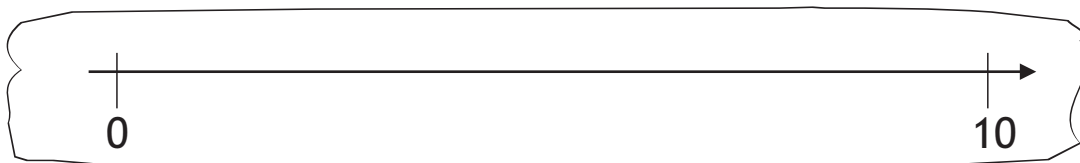
25, 50, 75



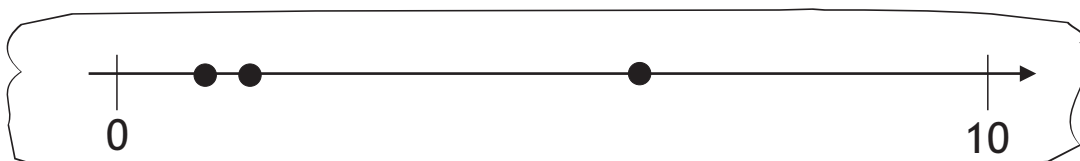
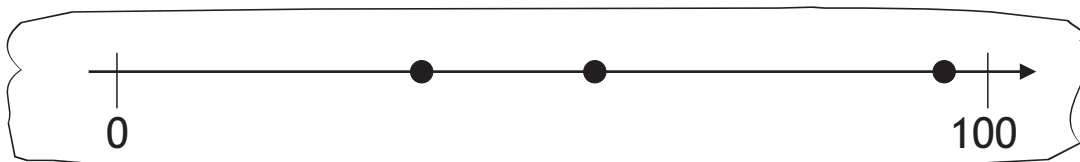
10, 40, 70



5, 2.5, 8

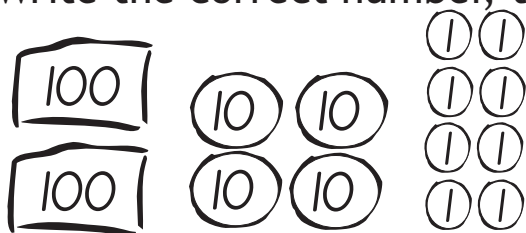


Estimate these markings

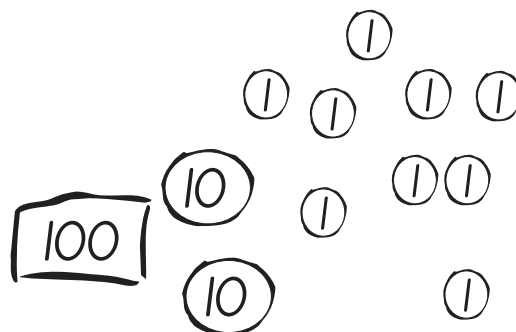
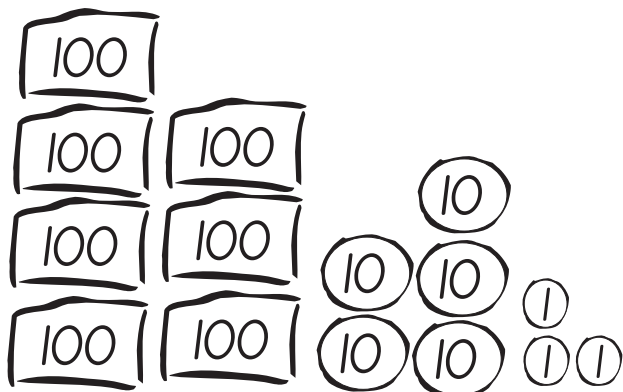
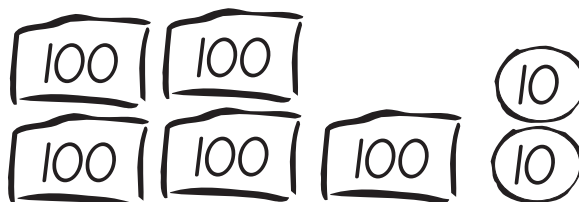
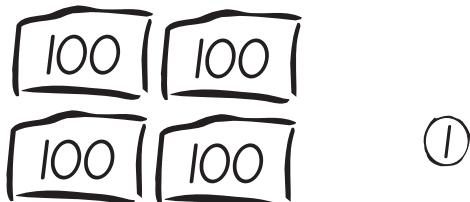
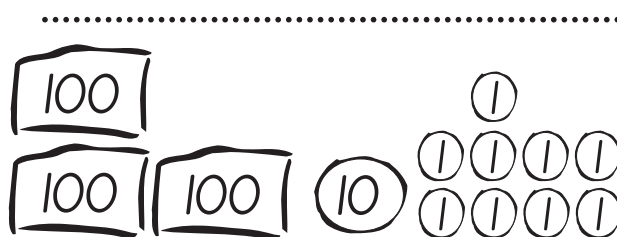
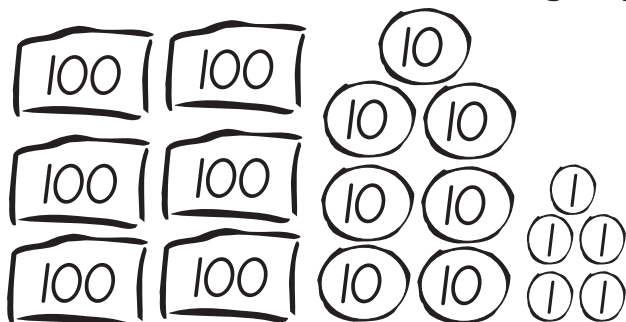
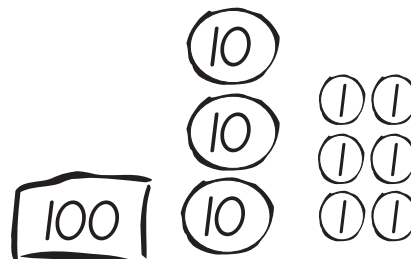


PLACE VALUE

Write the correct number, then write the number in words.



248 two hundred and forty eight



Write down these in number form.

ninety three

two hundred and forty seven

five hundred and one

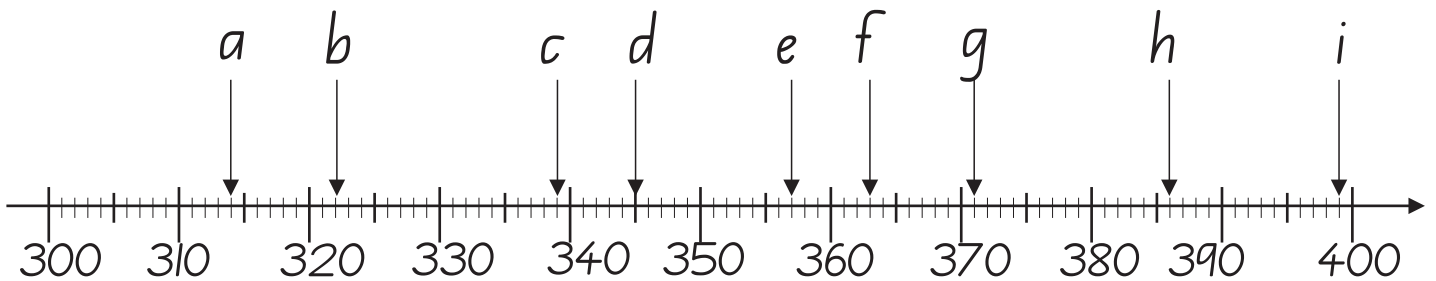
six hundred and eight

Split these numbers into hundreds, tens and units.

	H	T	U
124 =	<input type="text" value="100"/>	<input type="text" value="20"/>	<input type="text" value="4"/>
75 =	<input type="text"/>	<input type="text"/>	<input type="text"/>
963 =	<input type="text"/>	<input type="text"/>	<input type="text"/>
808 =	<input type="text"/>	<input type="text"/>	<input type="text"/>
743 =	<input type="text"/>	<input type="text"/>	<input type="text"/>
519 =	<input type="text"/>	<input type="text"/>	<input type="text"/>

NUMBERS TO 1000

Which numbers have been labelled?



$a = 314$ three hundred and fourteen.....

$b =$

$c =$

$d =$

$e =$

$f =$

$g =$

$h =$

$i =$

NUMBERS

Write the biggest and smallest numbers that you can using each of these three digits.

4, 7, 1,

5, 8, 2,

3, 2, 7,

7, 6, 8,

1, 0, 9,

0, 3, 0,

Sort these numbers into the right order.

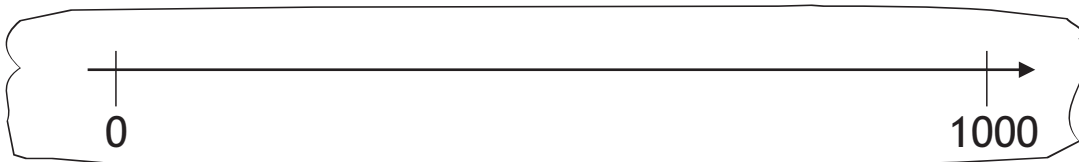
848, 425, 314, 616, 858

.....

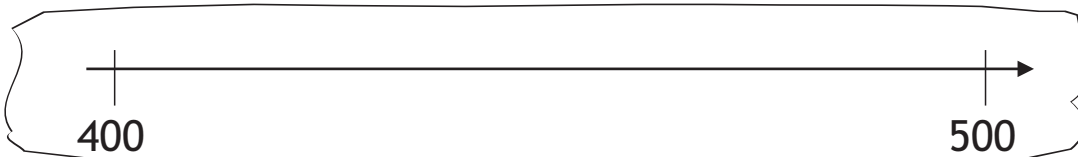
662, 686, 683, 648, 678

.....

Mark on the number line the numbers 200, 400, 600 and 800.



Mark on the number line the numbers 430, 443, 450, 455, 478.



HUNDREDS TENS and UNITS

675 is $\boxed{600} + \boxed{70} + \boxed{5}$

864 is $\boxed{} + \boxed{} + \boxed{}$

942 is $\boxed{} + \boxed{} + \boxed{}$

310 is $\boxed{} + \boxed{} + \boxed{}$

Adding and subtracting big numbers.

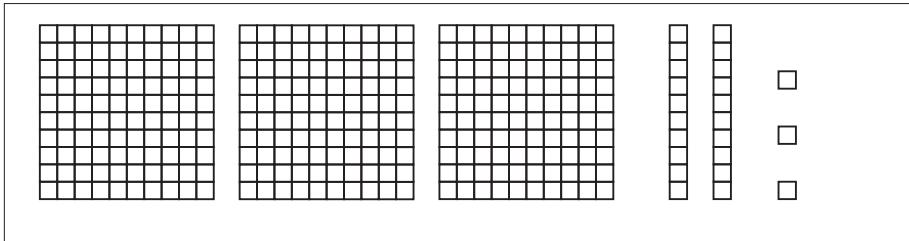
$$\begin{array}{r}
 942 \\
 - 621 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 295 \\
 - 152 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 368 \\
 - 147 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 314 \\
 + 254 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 451 \\
 + 523 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 321 \\
 \downarrow \downarrow \downarrow \\
 \downarrow \downarrow \downarrow \\
 \downarrow \downarrow \downarrow \\
 40-20=20 \\
 900-600=300
 \end{array}$$

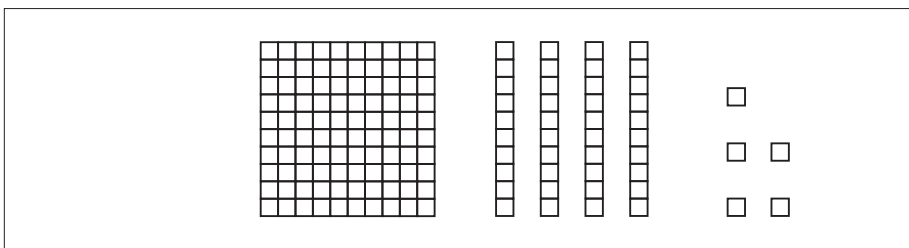
$$\begin{array}{r}
 437 \\
 + 122 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 243 \\
 + 714 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 317 \\
 - 105 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 555 \\
 - 453 \\
 \hline
 \end{array}$$

ADDITION

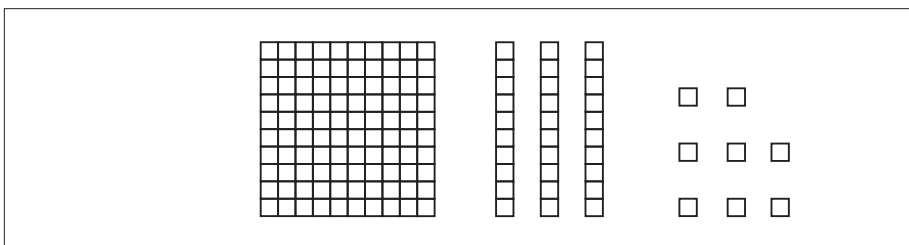
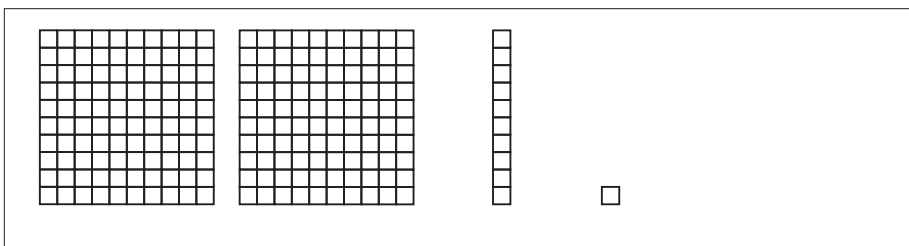
Write down the number that each picture represents then add.



323

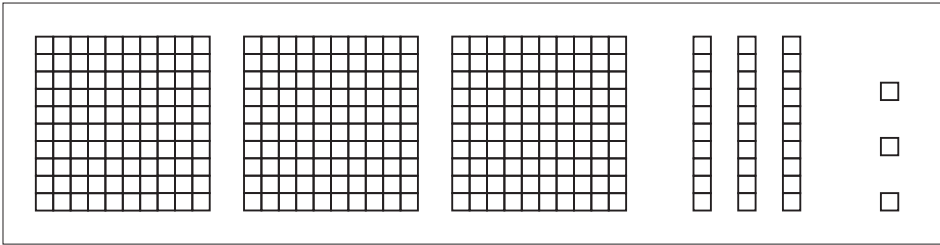
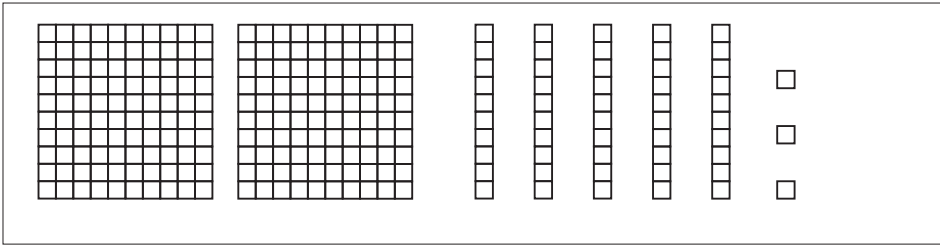


+ 145

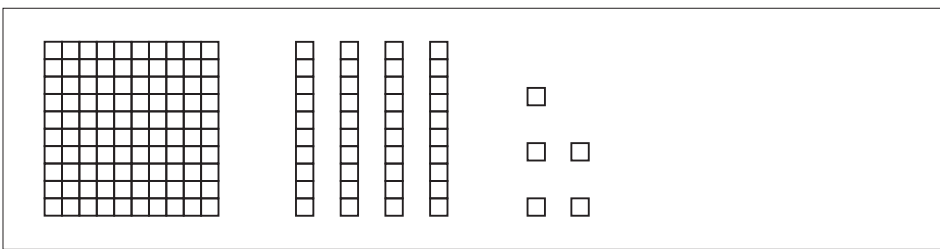


+

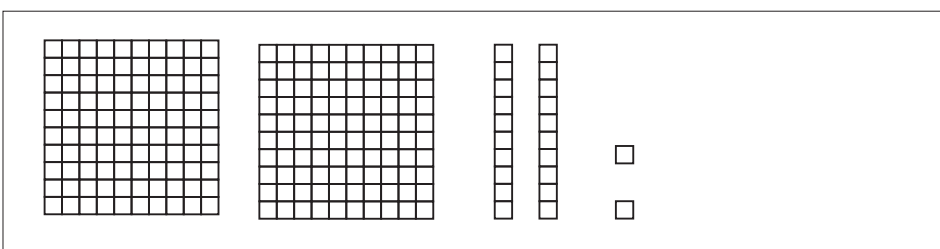
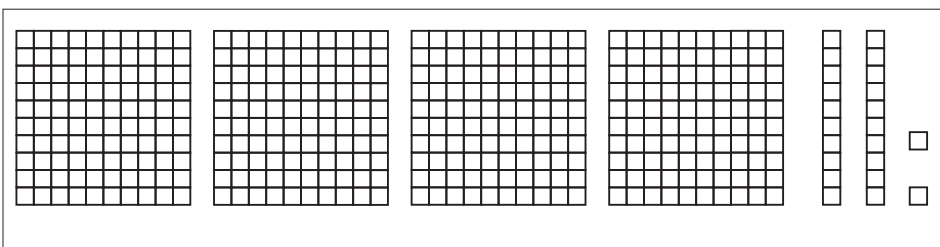




$$\begin{array}{r}
 \square \\
 + \square \\
 \hline
 \square
 \end{array}$$



$$\begin{array}{r}
 \square \\
 + \square \\
 \hline
 \square
 \end{array}$$

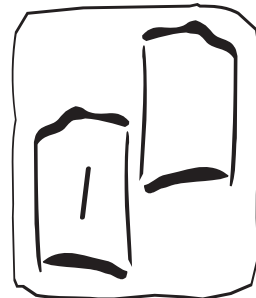
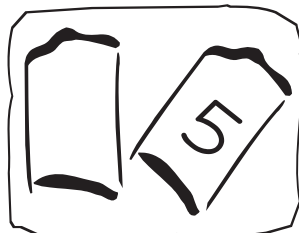
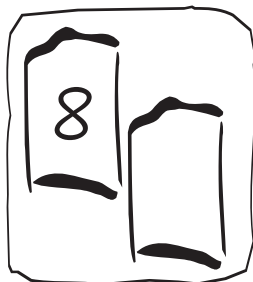


$$\begin{array}{r}
 \square \\
 + \square \\
 \hline
 \square
 \end{array}$$

ADDITION

Using Mental Strategies

Fill in all the pairs of numbers needed to add to 10.



Find pairs that add to 10 to help you answer.

$$2 + 8 + 1 + 9 = \dots\dots\dots$$

$$1 + 8 + 9 + 6 + 2 + 4 + 5 = \dots\dots\dots$$

$$4 + 2 + 2 + 3 + 6 + 8 = \dots\dots\dots$$

$$8 + 1 + 4 + 7 + 3 + 6 = \dots\dots\dots$$

Do these sums by treating the 9 as a 10 and subtracting the extra 1 at the end.

$$8 + 9 = 8 + 10 - 1$$

$$= 17$$

$$15 + 9 = \dots\dots\dots$$

$$29 + 9 = \dots\dots\dots$$

$$37 + 9 = \dots\dots\dots$$

$$86 + 9 = \dots\dots\dots$$

$$58 + 9 = \dots\dots\dots$$

$$72 + 9 = \dots\dots\dots$$

$$44 + 9 = \dots\dots\dots$$

$$63 + 9 = \dots\dots\dots$$

ARITHMETIC

Using Mental Strategies

Complete these sums by partitioning.

Look at this example:

$$\begin{array}{r} 73 - 5 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ = \boxed{60} + \boxed{13} - \boxed{5} \\ \downarrow \quad \downarrow \quad \swarrow \\ = \boxed{60} + \boxed{8} \\ = 68 \end{array}$$

$28 - 9$

$51 - 4$

$42 - 7$

$63 - 5$

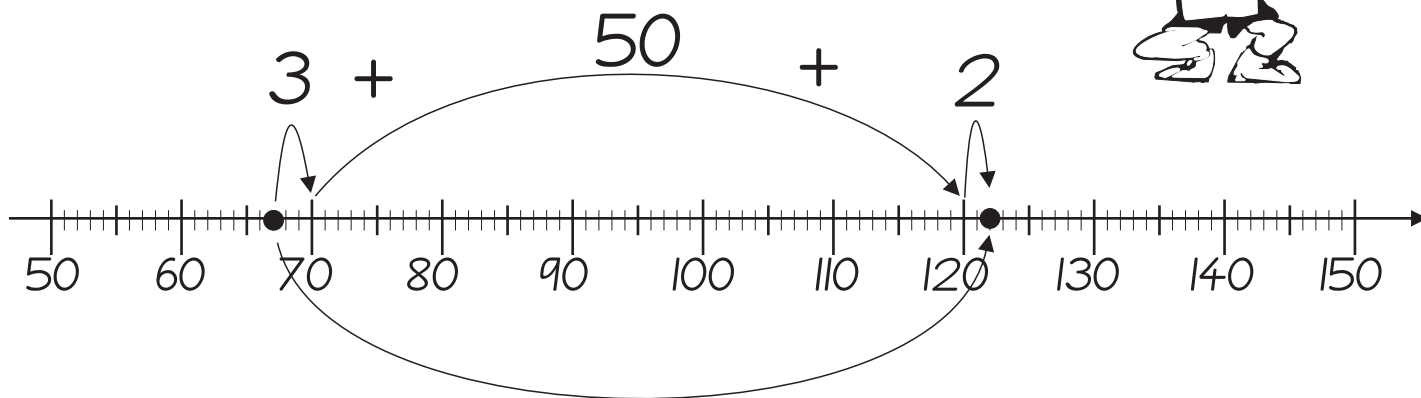
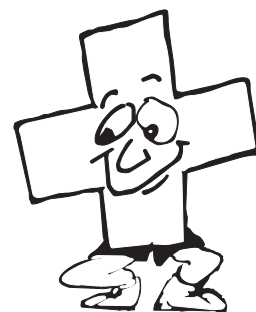
$35 - 6$

$74 - 8$

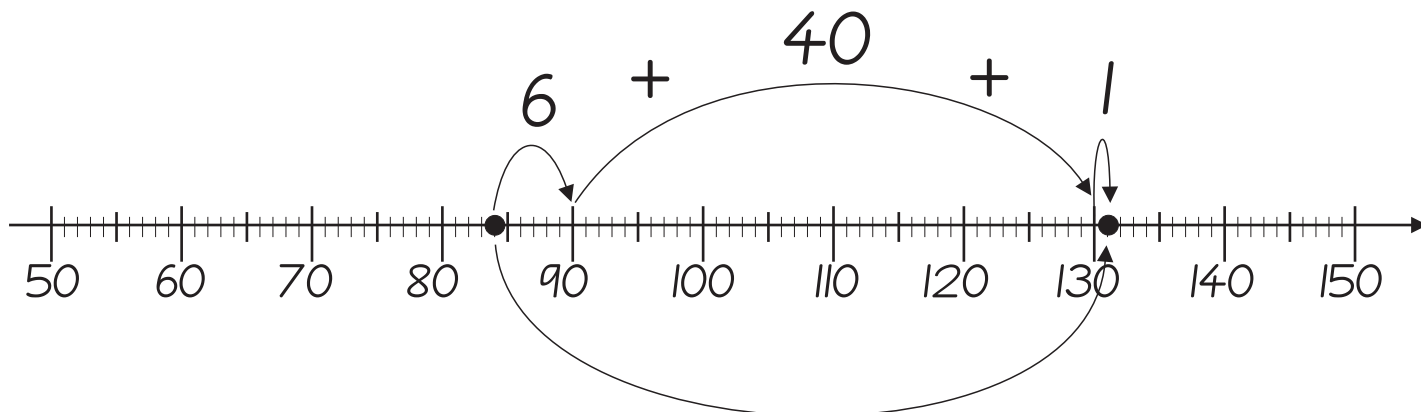
ARITHMETIC STRATEGIES

Look at how this strategy uses the number line.

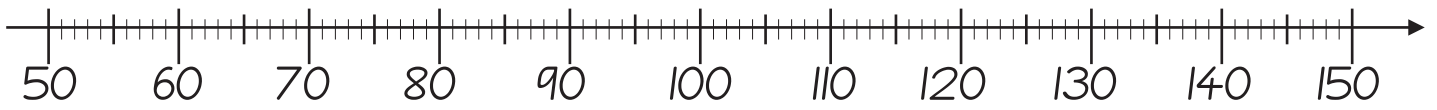
$$67 + 55 = \underline{122}$$



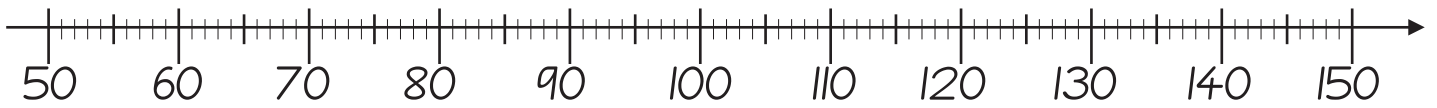
$$84 + 47 = \underline{131}$$



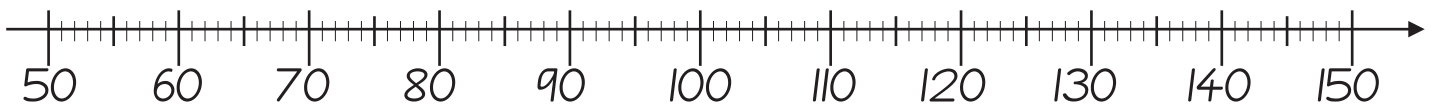
Use the number lines to calculate these additions.



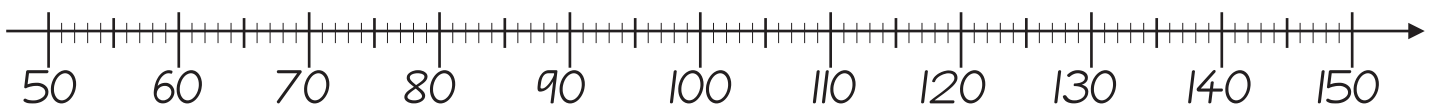
$$68 + 75 = \dots\dots\dots$$



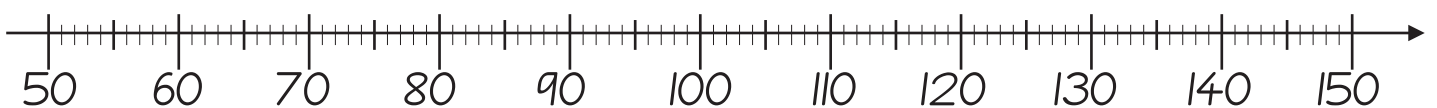
$$103 + 28 = \dots\dots\dots$$



$$88 + 47 = \dots\dots\dots$$



$$56 + 66 = \dots\dots\dots$$

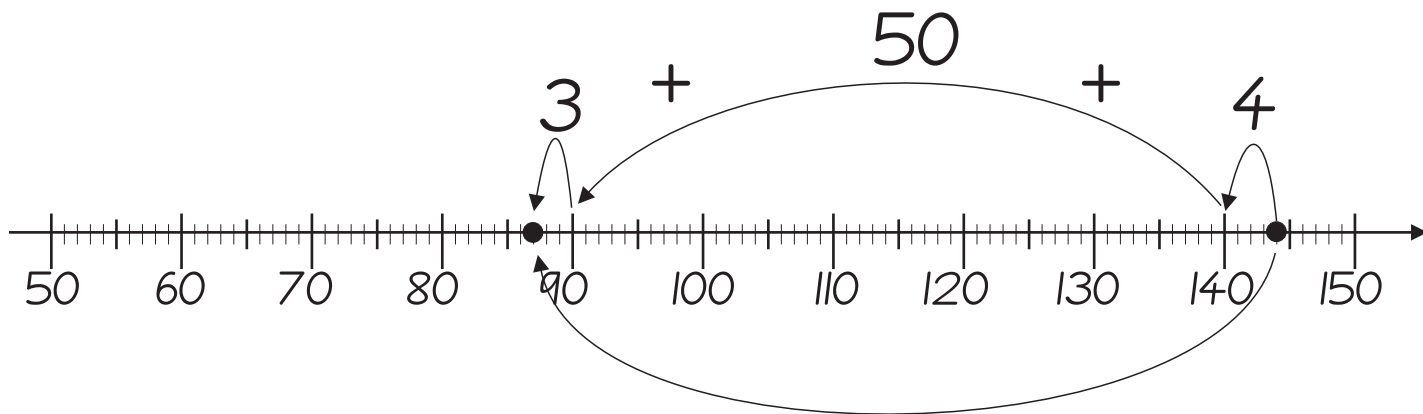


$$97 + 17 = \dots\dots\dots$$

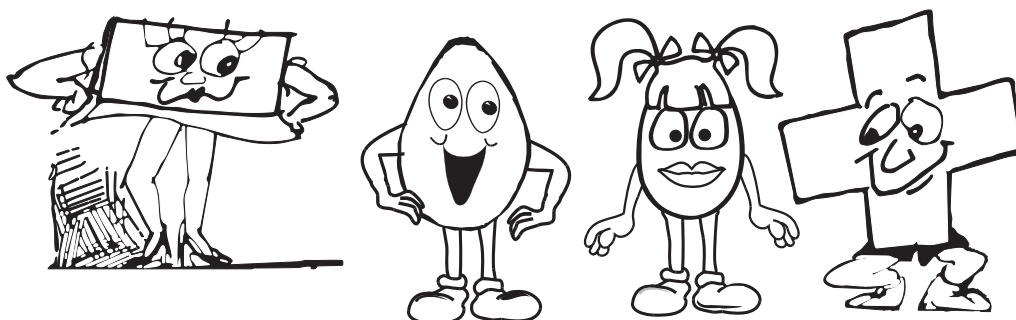
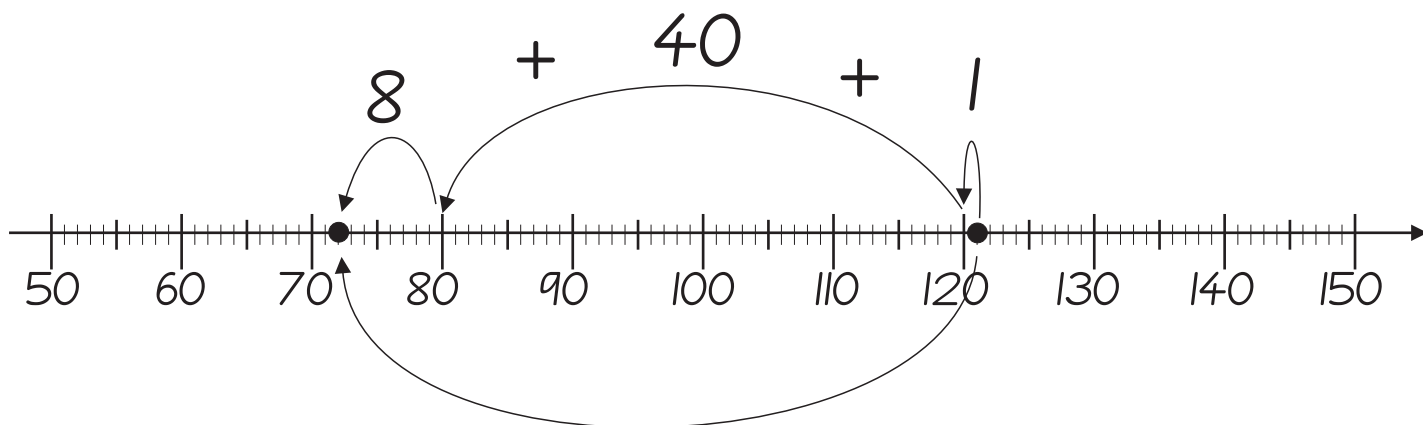
ARITHMETIC STRATEGIES

Look at how this strategy uses the number line.

$$144 - 57 = \underline{87} \dots\dots\dots$$

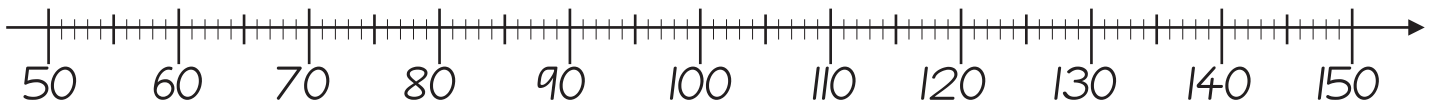


$$121 - 49 = \underline{72} \dots\dots\dots$$

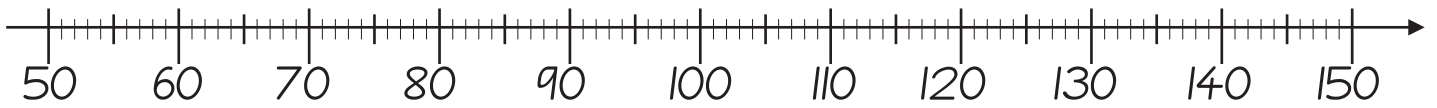


There are all sorts of ways to do arithmetic.

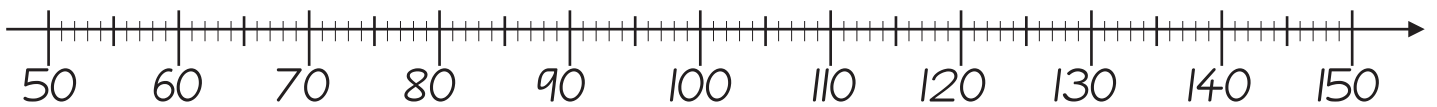
Use the number lines to calculate these subtractions.



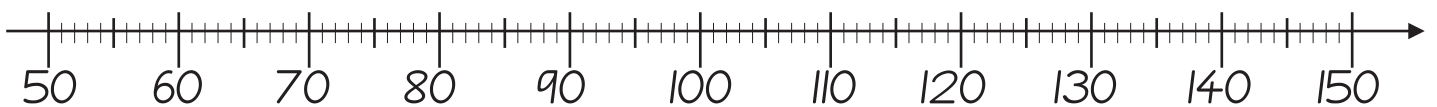
$$145 - 117 = \dots\dots\dots$$



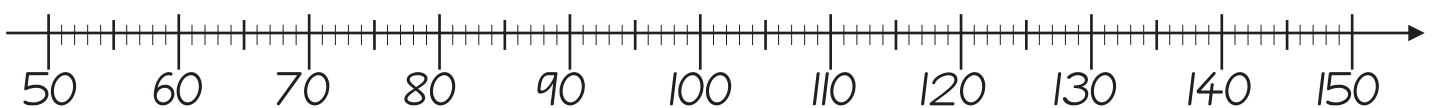
$$145 - 78 = \dots\dots\dots$$



$$132 - 59 = \dots\dots\dots$$



$$127 - 32 = \dots\dots\dots$$



$$126 - 66 = \dots\dots\dots$$

MORE ARITHMETIC

Use the number lines to calculate these additions.

$$39 + 15 = \dots\dots\dots$$

$$28 + 35 = \dots\dots\dots$$

$$42 + 29 = \dots\dots\dots$$

$$27 + 33 = \dots\dots\dots$$

$$35 + 47 = \dots\dots\dots$$

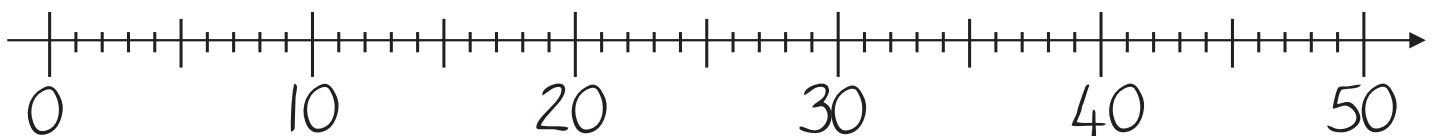
$$18 + 44 = \dots\dots\dots$$

$$26 + 38 = \dots\dots\dots$$

$$33 + 59 = \dots\dots\dots$$

$$28 + 48 = \dots\dots\dots$$

$$54 + 47 = \dots\dots\dots$$



Use the number lines to calculate these subtractions.

$$35 - 18 = \dots\dots\dots$$

$$42 - 9 = \dots\dots\dots$$

$$56 - 27 = \dots\dots\dots$$

$$48 - 29 = \dots\dots\dots$$

$$41 - 16 = \dots\dots\dots$$

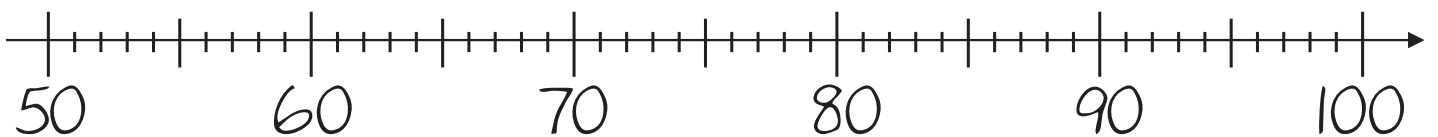
$$82 - 35 = \dots\dots\dots$$

$$73 - 14 = \dots\dots\dots$$

$$56 - 41 = \dots\dots\dots$$

$$78 - 33 = \dots\dots\dots$$

$$65 - 24 = \dots\dots\dots$$



UNDERSTANDING \times and \div

Complete these.

$2+2+2+2$ can be written as $4 \times 2 = 8$

$3+3+3+3+3+3$ can be written as

$5+5+5+5+5+5+5+5+5+5$ can be written as

..... can be written as 8×6

..... can be written as 3×8

Complete these.

Hint, there are 4 sixes

$6 + 6 + 6 + 6 = 24$ can be written as $24 \div 6 = 4$

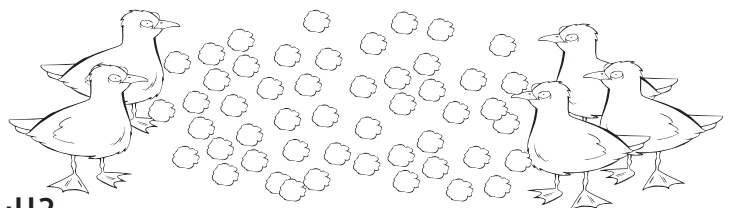
$11 + 11 + 11 + 11 = 44$ can be written as

$5 + 5 + 5 + 5 + 5 + 5 + 5 = 35$
can be written as

$3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 27$
can be written as

$7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 = 56$
can be written as

50 pieces of bread, 5 seagulls.
How much bread for each seagull?



MULTIPLICATION

STRATEGIES

Use easy sums to calculate harder sums.

$$\begin{array}{l} 6 \times 14 \\ \downarrow \quad \wedge \\ = (6 \times 7 \times 2) \\ = (42 \times 2) \\ = (84) \end{array}$$

$$\begin{array}{l} 7 \times 24 \\ \downarrow \quad \wedge \\ = (7 \times 12 \times 2) \\ = (\dots \times 2) \\ = (\dots) \end{array}$$

$$\begin{array}{l} 3 \times 22 \\ \downarrow \quad \wedge \\ = (3 \times 11 \times 2) \\ = (\dots) \\ = (\dots) \end{array}$$

$$\begin{array}{l} 5 \times 16 \\ \downarrow \quad \wedge \\ = (5 \times 8 \times 2) \\ = (\dots) \\ = (\dots) \end{array}$$

$$\begin{array}{l} 9 \times 18 \\ = (\dots) \\ = (\dots) \\ = (\dots) \end{array}$$

$$\begin{array}{l} 15 \times 20 \\ = (\dots) \\ = (\dots) \\ = (\dots) \end{array}$$

35×3 is the same as

$$\begin{array}{r} 30 \times 3 = 90 \\ + 5 \times 3 = 15 \\ \hline 105 \end{array}$$

Now try these

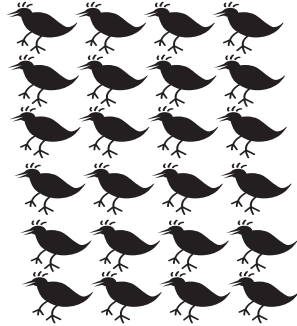
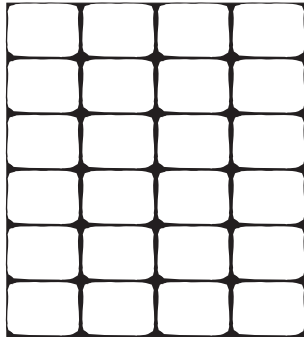
$24 \times 6 =$

$18 \times 5 =$

$32 \times 4 =$

$46 \times 3 =$

MULTIPLYING



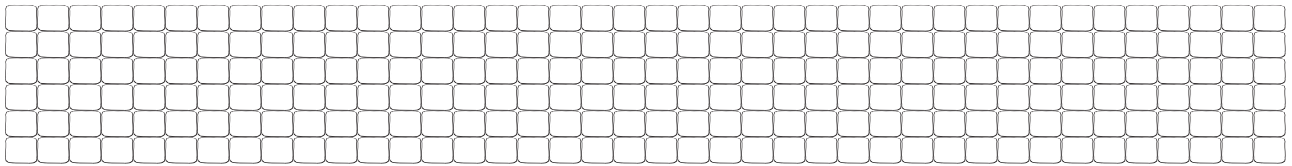
Both examples show 6×4

$$6 \times 4 = \dots\dots\dots$$

Now try these

$$6 \times 40 = \dots\dots\dots$$

$$6 \times 400 = \dots\dots\dots$$



$$7 \times 3 = \dots\dots\dots$$

$$7 \times 30 = \dots\dots\dots$$

$$7 \times 300 = \dots\dots\dots$$

$$4 \times 8 = \dots\dots\dots$$

$$4 \times 80 = \dots\dots\dots$$

$$4 \times 800 = \dots\dots\dots$$

$$3 \times 5 = \dots\dots\dots$$

$$3 \times 50 = \dots\dots\dots$$

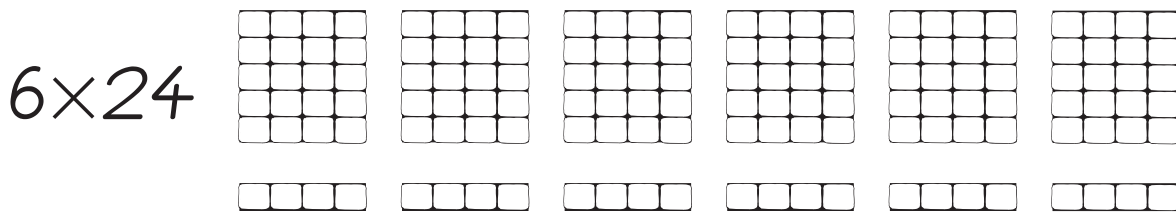
$$3 \times 500 = \dots\dots\dots$$

$$8 \times 2 = \dots\dots\dots$$

$$8 \times 20 = \dots\dots\dots$$

$$8 \times 200 = \dots\dots\dots$$

MULTIPLYING



This is the same as

$$\begin{array}{r}
 6 \times 20 = \underline{120} \\
 + 6 \times 4 = \underline{24} \\
 \hline
 144
 \end{array}$$

Now try these

$$4 \times 41$$

$$2 \times 53$$

=

=

$$3 \times 32$$

$$5 \times 27$$

=

=

MULTIPLYING and DIVIDING

When multiplying by 10 add a zero.
When multiplying by 100 add two zeros.

$4 \times 10 = \dots\dots\dots$

$9 \times 10 = \dots\dots\dots$

$3 \times 10 = \dots\dots\dots$

$33 \times 10 = \dots\dots\dots$

$51 \times 10 = \dots\dots\dots$

$27 \times 10 = \dots\dots\dots$

$6 \times 100 = \dots\dots\dots$

$2 \times 100 = \dots\dots\dots$

$9 \times 100 = \dots\dots\dots$

$75 \times 100 = \dots\dots\dots$

$43 \times 100 = \dots\dots\dots$

$68 \times 100 = \dots\dots\dots$

When dividing by 10 take off a zero.
When dividing by 100 take off two zeros.

$30 \div 10 = \dots\dots\dots$

$70 \div 10 = \dots\dots\dots$

$40 \div 10 = \dots\dots\dots$

$500 \div 10 = \dots\dots\dots$

$430 \div 10 = \dots\dots\dots$

$370 \div 10 = \dots\dots\dots$

$800 \div 100 = \dots\dots\dots$

$700 \div 100 = \dots\dots\dots$

$200 \div 100 = \dots\dots\dots$

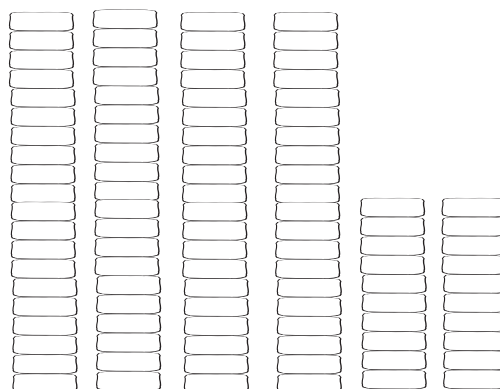
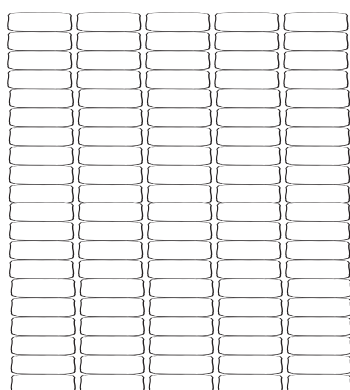
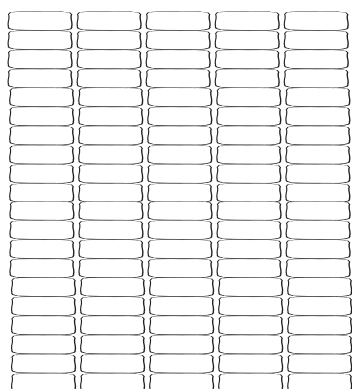
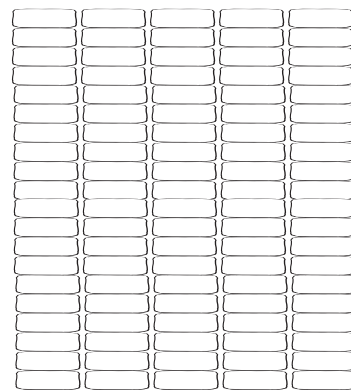
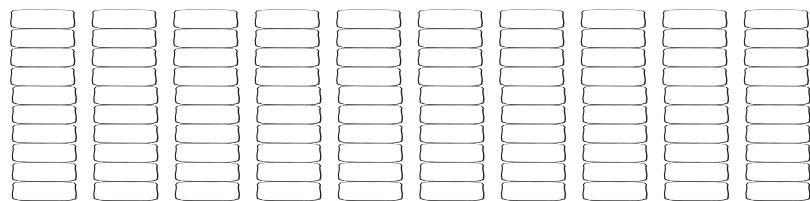
$3000 \div 100 = \dots\dots\dots$

$5400 \div 100 = \dots\dots\dots$

$1200 \div 100 = \dots\dots\dots$

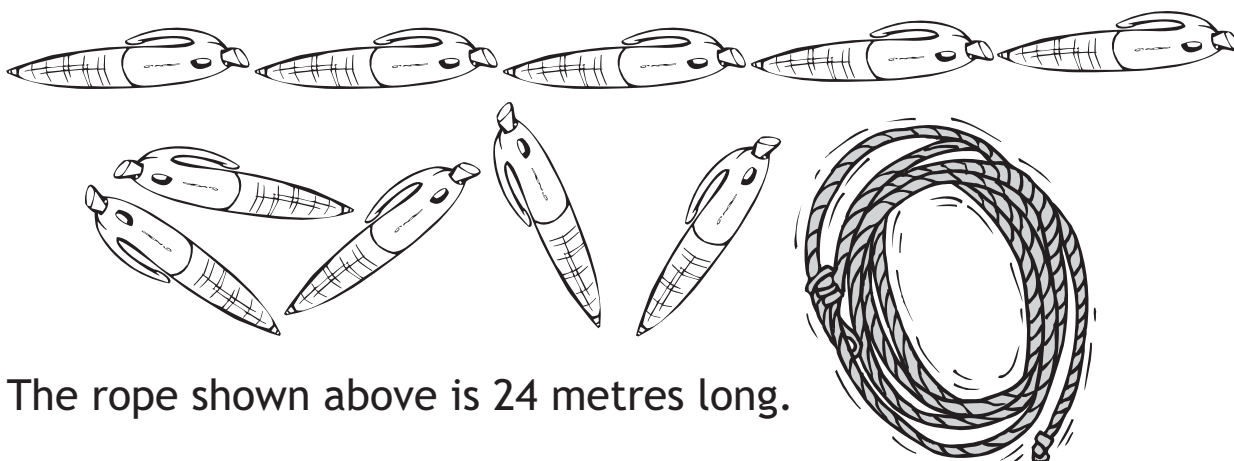
Below are 5 piles of 100 bricks.

How many bricks are there?



A pen is 13cm long.

If placed end on end, how long would 10 pencils measure?



The rope shown above is 24 metres long.

If it is cut into 3 equal lengths, how long will each length be?

If it is cut into 4 equal lengths, how long will each length be?

If it is cut into 12 equal lengths, how long will each length be?

NUMBER PUZZLES

Find 4 different odd numbers that add up to 16.

$$\square + \square + \square + \square = 16$$

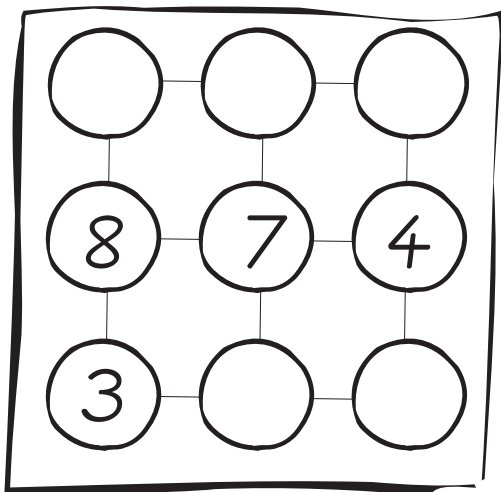
Find 4 different odd numbers that add up to 20.

$$\square + \square + \square + \square = 20$$

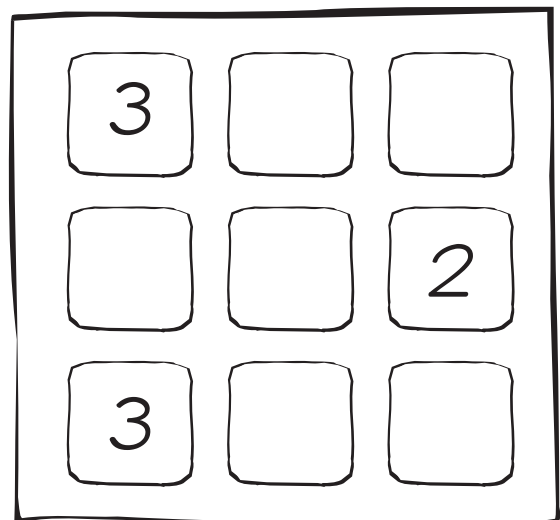
Find 6 different numbers less than 10 that add up to 30.

$$\square + \square + \square + \square + \square + \square = 30$$

Use only the numbers 1 to 9.
Put the numbers in each circle
so that the difference between
each pair of joined circles is odd.

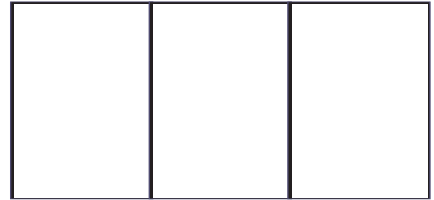
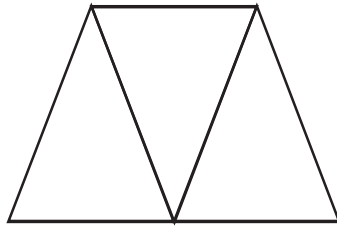
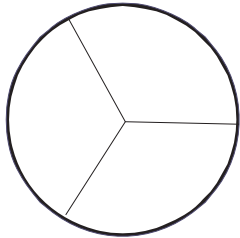


Each row must add to 10.
Each column must add to 10.
Do not use zero.

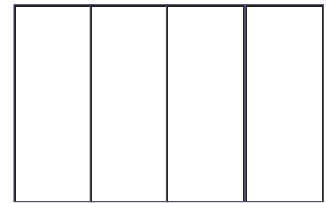
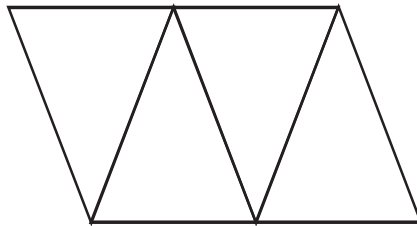
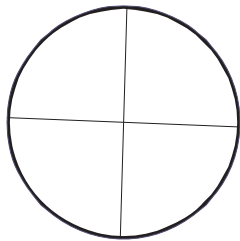


FRACTIONS

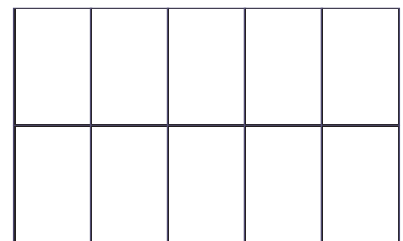
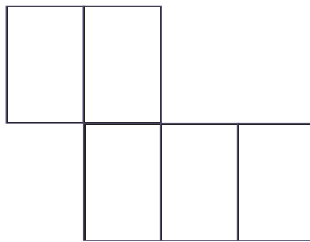
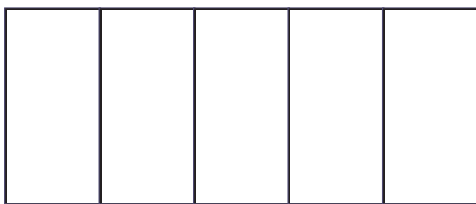
Shade $\frac{1}{3}$ of these shapes.



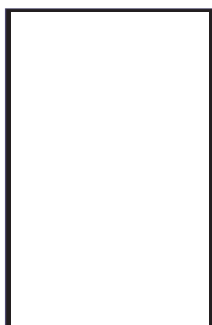
Shade $\frac{1}{4}$ of these shapes.



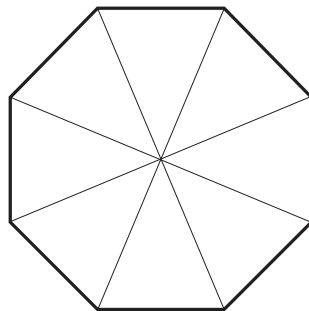
Shade $\frac{1}{5}$ of these shapes.



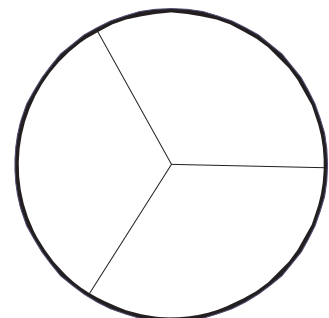
Shade in the fraction written next to each shape.



one half



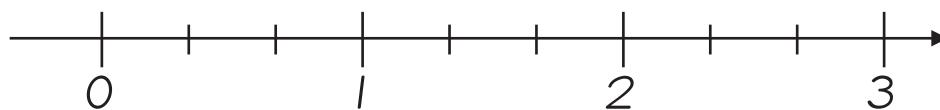
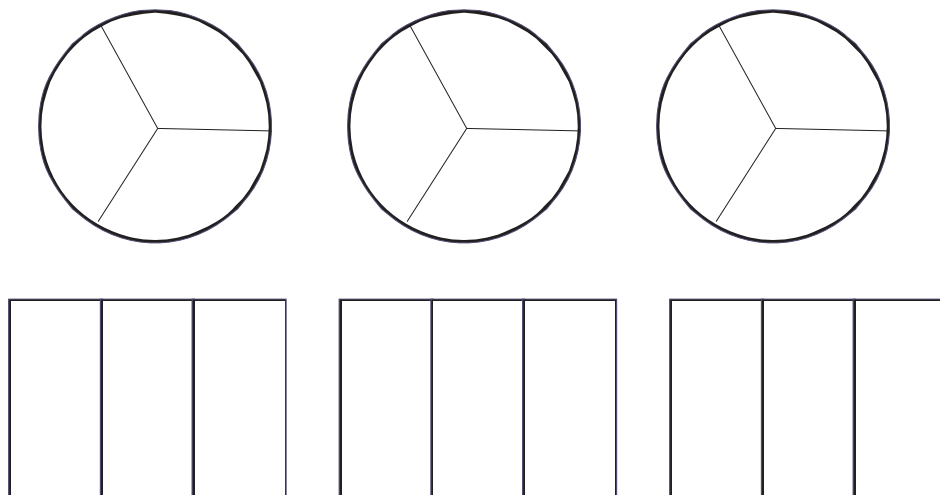
three quarters



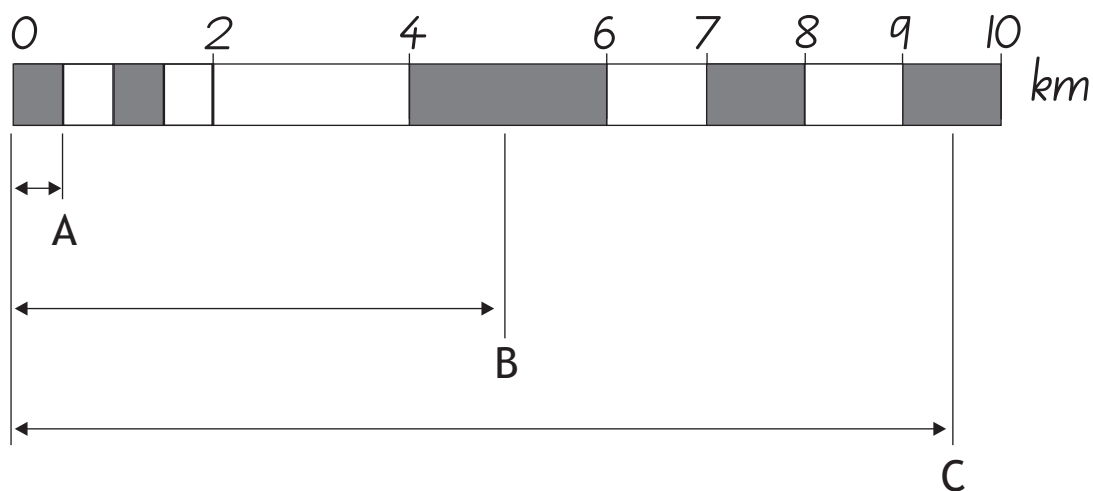
two thirds

FRACTIONS

Illustrate the number $2\frac{2}{3}$ in 3 different ways.



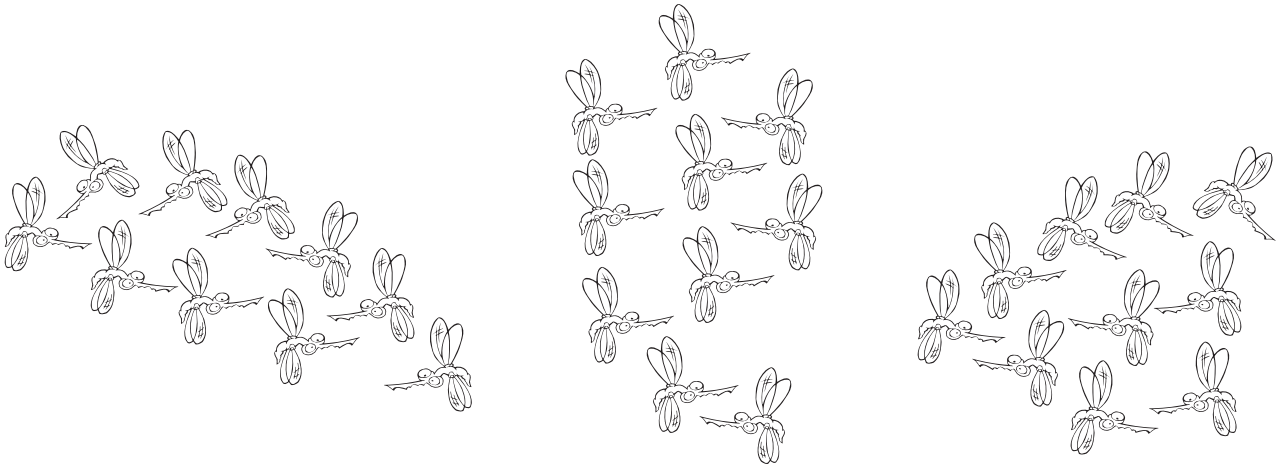
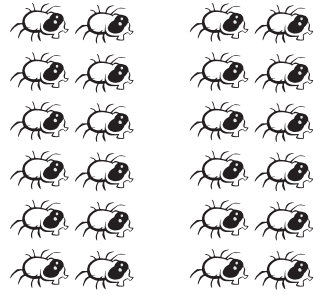
Write the distances A, B and C shown on this scale.



What is one half of 24 bugs?

$$24 \div 2 =$$

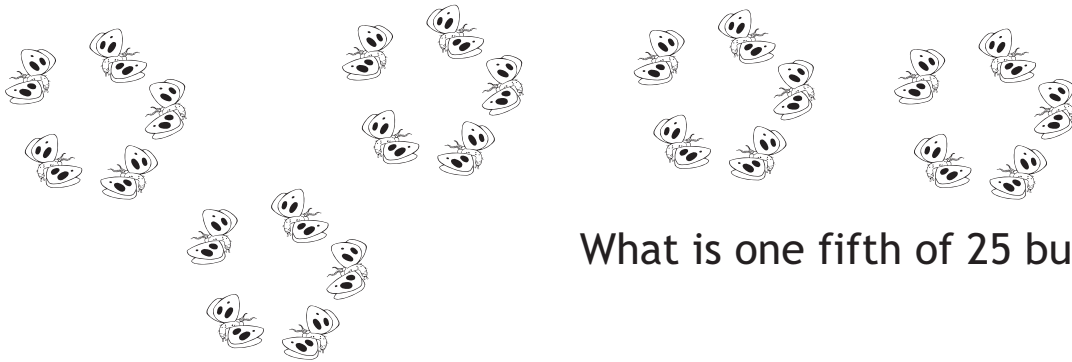
.....



What is one third of 30 mosquitos?

$$30 \div \quad =$$

.....

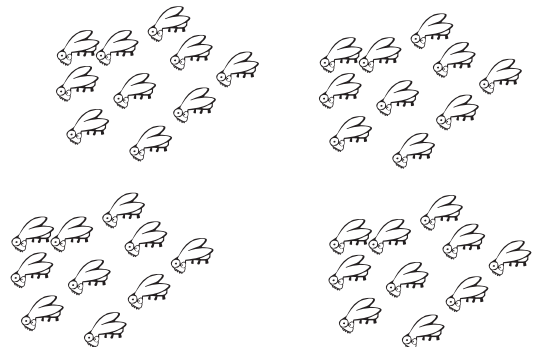


What is one fifth of 25 butterflies?

.....

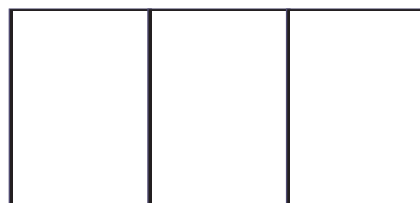
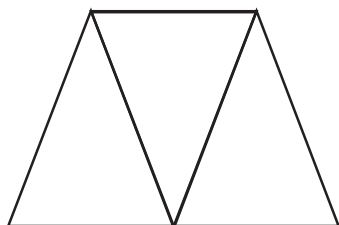
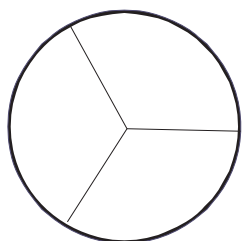
What is one quarter of 40 flies?

.....

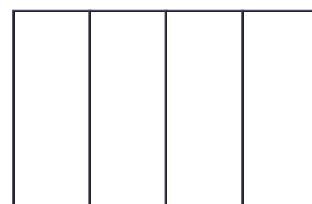
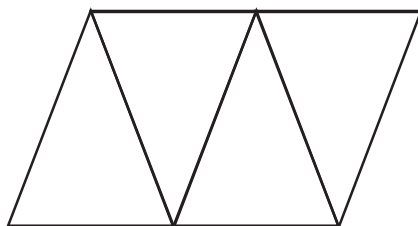
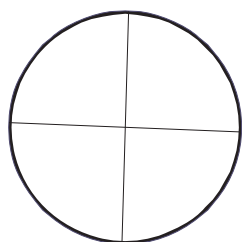


FRACTIONS

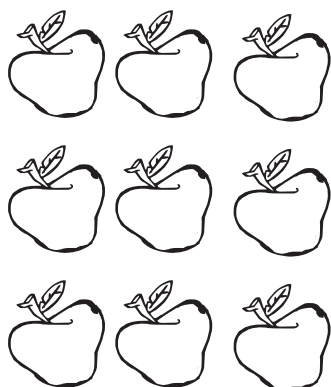
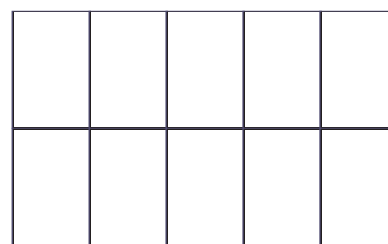
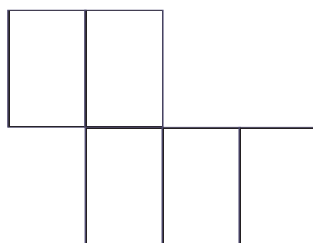
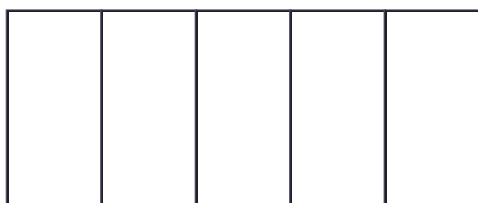
Shade $\frac{2}{3}$ of these shapes.



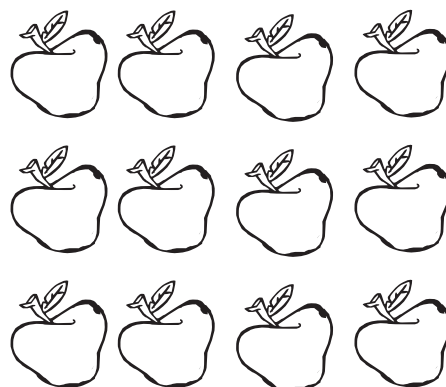
Shade $\frac{3}{4}$ of these shapes.



Shade $\frac{3}{5}$ of these shapes.



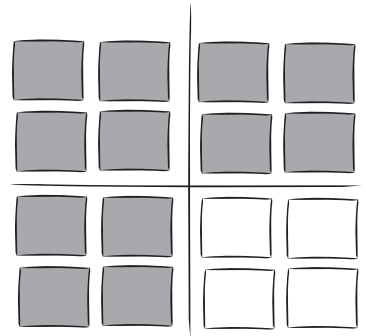
Shade $\frac{2}{3}$ of each
bunch the apples.



Calculate $\frac{3}{4}$ of 16.

Multiply by the top number

Divide by the bottom number



$$16 \div 4 = 4$$

$$4 \times 3 = 12 \quad \therefore \frac{3}{4} \text{ of } 16 = 12$$

Find the following:

$\frac{1}{2}$ of 28

$\frac{3}{4}$ of 20

$\frac{3}{10}$ of 100

$\frac{2}{3}$ of 24

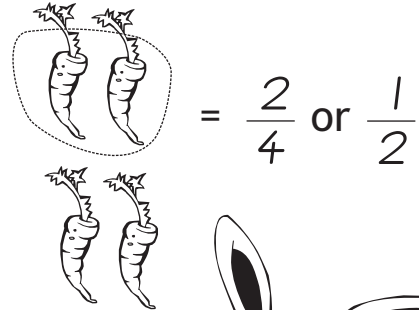
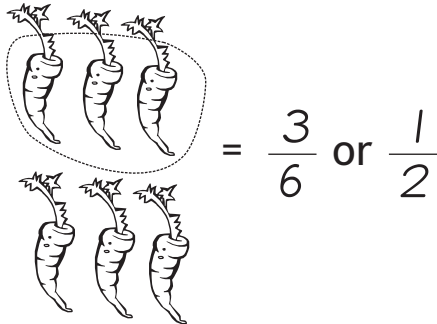
$\frac{2}{5}$ of 25

$\frac{9}{10}$ of 40

FRACTIONS



Some fractions are the same.



Shade each of the fractions given.

$\frac{1}{2}$	<input type="text"/>	<input type="text"/>					
$\frac{2}{4}$	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
$\frac{3}{6}$	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
$\frac{4}{8}$	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

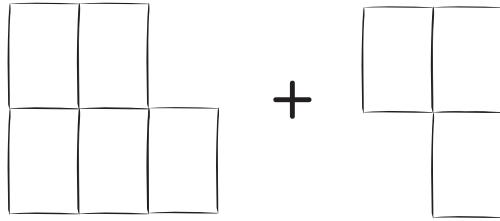
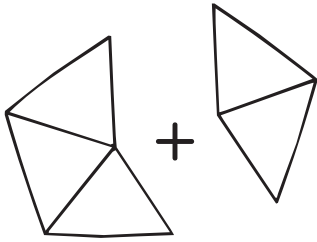
All the fractions above are the
They are called equivalent fractions.

Finish these fraction additions

$\frac{3}{4} + \dots = \dots$

$\dots + \dots = \dots$

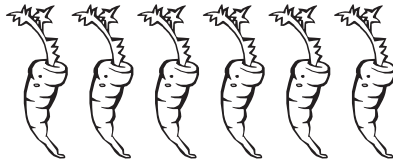
Finish these fraction additions.



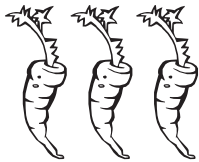
..... + = $\frac{1}{\dots\dots\dots}$

$\frac{5}{8}$ + =

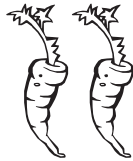
If you have 6 carrots



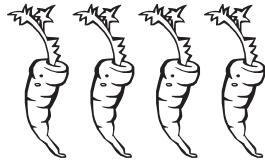
then:



3 carrots equals $\frac{1}{2}$ of the bunch.



2 carrots equals of the bunch.

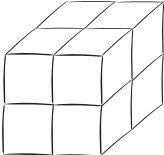


4 carrots equals of the bunch.

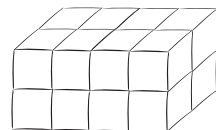
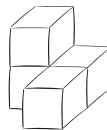
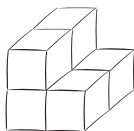
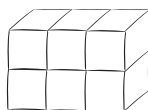
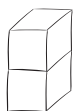


1 carrot equals of the bunch.

FRACTIONS

This is 1 unit. 

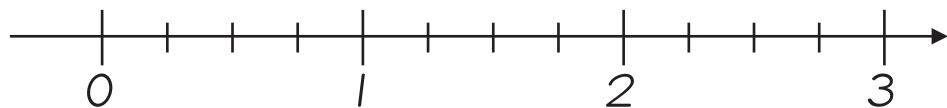
Give the unit amount of each of these.



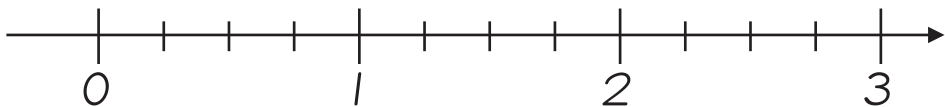
.....

Use the number lines to help you do these additions and subtractions.

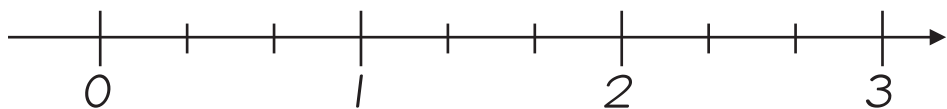
$$\frac{1}{2} + \frac{3}{4} + \frac{1}{2} = \dots\dots\dots$$



$$\frac{1}{2} + \frac{3}{4} + \frac{1}{4} = \dots\dots\dots$$



$$\frac{2}{3} + \frac{2}{3} + \frac{2}{3} = \dots\dots\dots$$



EQUIVALENT FRACTIONS

Fractions that are the same size are called equivalent fractions.
Use this diagram to write as many equivalent fractions as you can.

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{5}$

$\frac{1}{6}$

$\frac{1}{8}$

$\frac{1}{10}$

$\frac{1}{12}$

.....

.....

.....

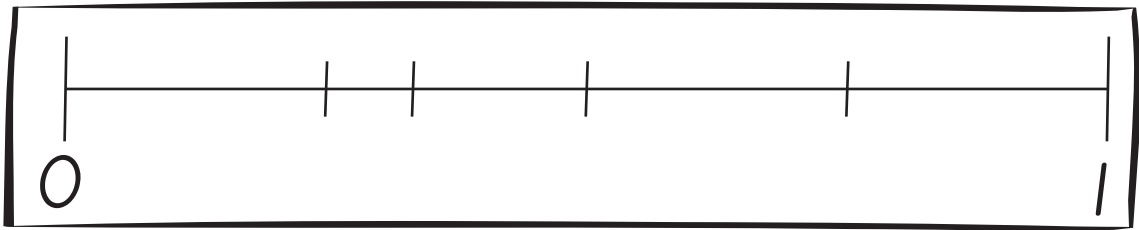
.....

.....

FRACTIONS

Write the fraction beside the correct place on the number line.

$$\frac{1}{2} \quad \frac{3}{4} \quad \frac{1}{3} \quad \frac{1}{4}$$



On the number line label the points: $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and $\frac{4}{5}$.



Find these fractions using the diagram on page 38.
Write these fractions in order of size.

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

.....
.....

MONEY

Use these coins to make \$5. There are three different ways.

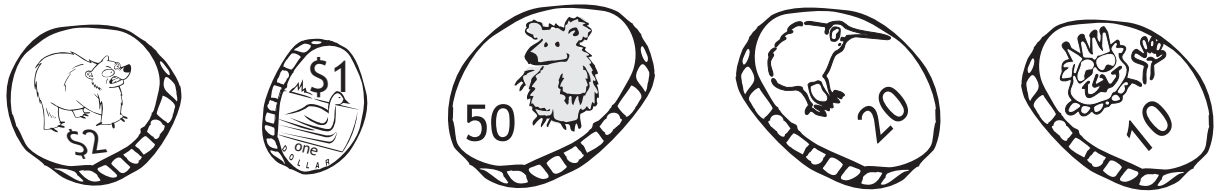


.....


.....


.....


Fill in the missing coins.



..... +  + = \$0.80

 + + = \$3.50

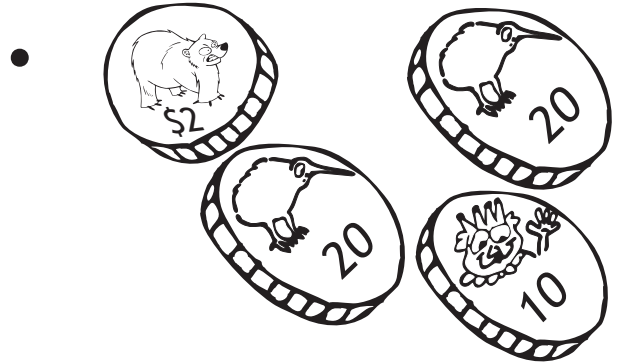
 + + = \$2.00

..... + +  = \$1.70

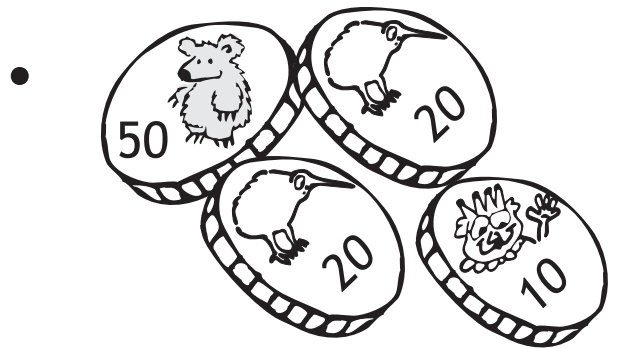
MONEY

Draw a line to show each equivalent total.

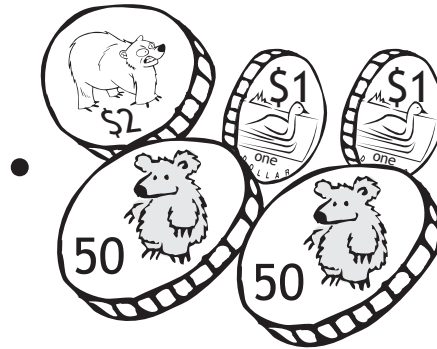
\$1.00 •



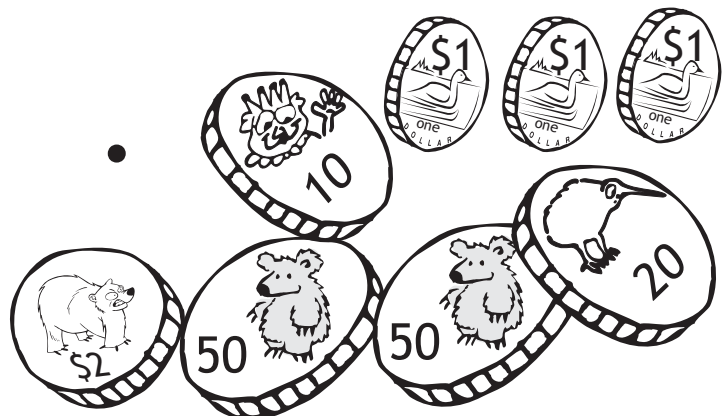
\$2.50 •



\$6.30 •



\$5 •



MEASUREMENT

Taking Readings

What units would you use to measure the lengths of following?

mm, cm, m, km



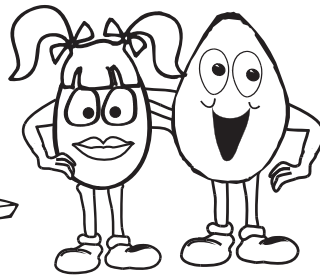
ant

.....



table

.....



height

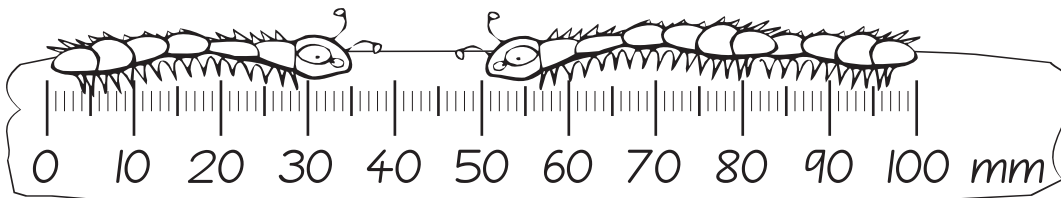
.....



plane distance

.....

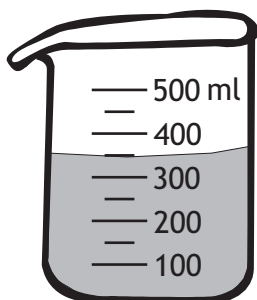
How long is each centipede?



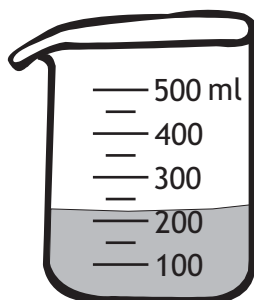
.....

.....

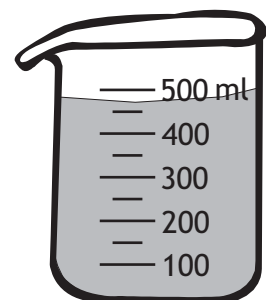
How much liquid in each beaker?



.....



.....



.....

MEASUREMENT

Taking Readings

Weights
For small weights use grams (g), for average weights use kilograms (kg) and for really heavy weights use tonnes.

1 kg = 1000 g
1 tonne = 1000 kg

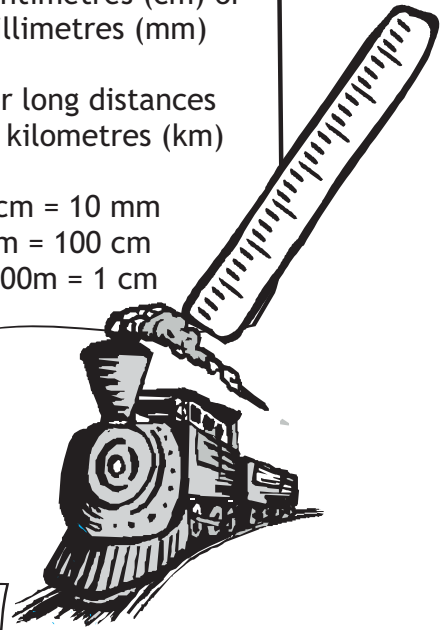
Liquids
litres (l)
millilitres (ml)
1 litre = 1000 ml



To measure lengths use metres (m) centimetres (cm) or millimetres (mm)

For long distances us kilometres (km)

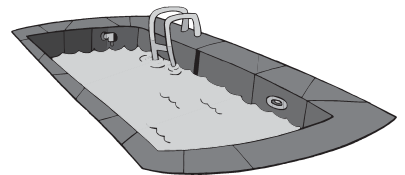
1 cm = 10 mm
1 m = 100 cm
1000m = 1 km



Which units would you use to measure....

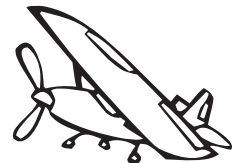
The weight of a train?

The length of a mouse?

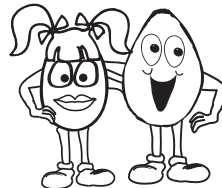


The amount of water in a swimming pool?

The distance from Auckland to Melbourne?



The weight of a person?



A large milk carton holds 2000 ml of milk.

How many litres is this?



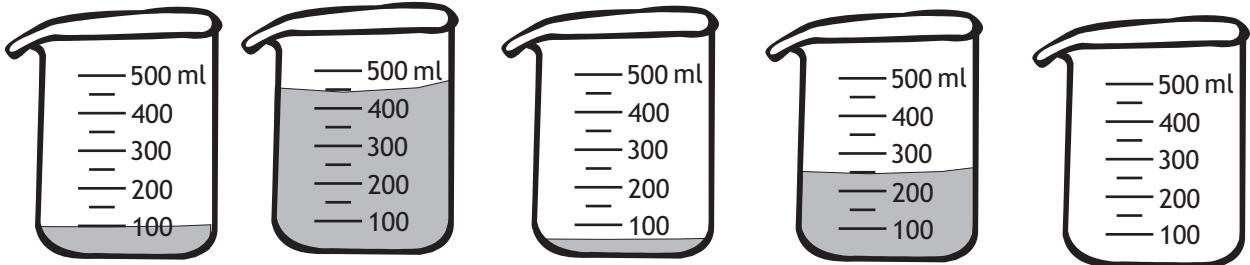
A cereal box weighs $\frac{1}{2}$ a kilogram.

How many grams is this?

MEASUREMENT

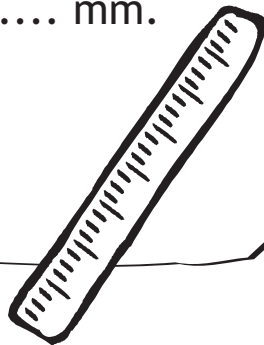
Taking Readings

Shade in the last beaker so that there is a total of 1 litre (1000 ml)



1 metre = cm

1 cm = mm.



Write these lengths in centimetres.

5 m

10 mm

3 m

100 mm

20 m

30 mm

1.5 m

55 mm



Weights and Liquids

1 kg = grams

1 tonne = Kilograms

1 litre = millilitres



Convert these measurements.

5 litres = ml

1.25 litres = ml

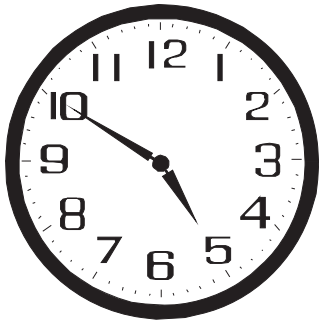
3 tonnes = kg

2.5 kg = g

TIME



Write the time on each clock.



4:50

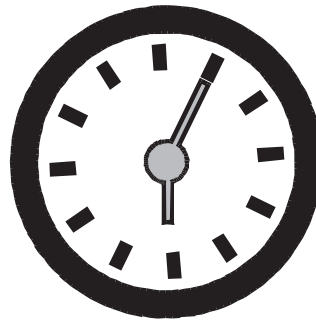
 Ten to
 five



.....



.....



.....

How many

How many seconds in 3 minutes?

How many minutes in 5 hours?

How many hours in 2 days?

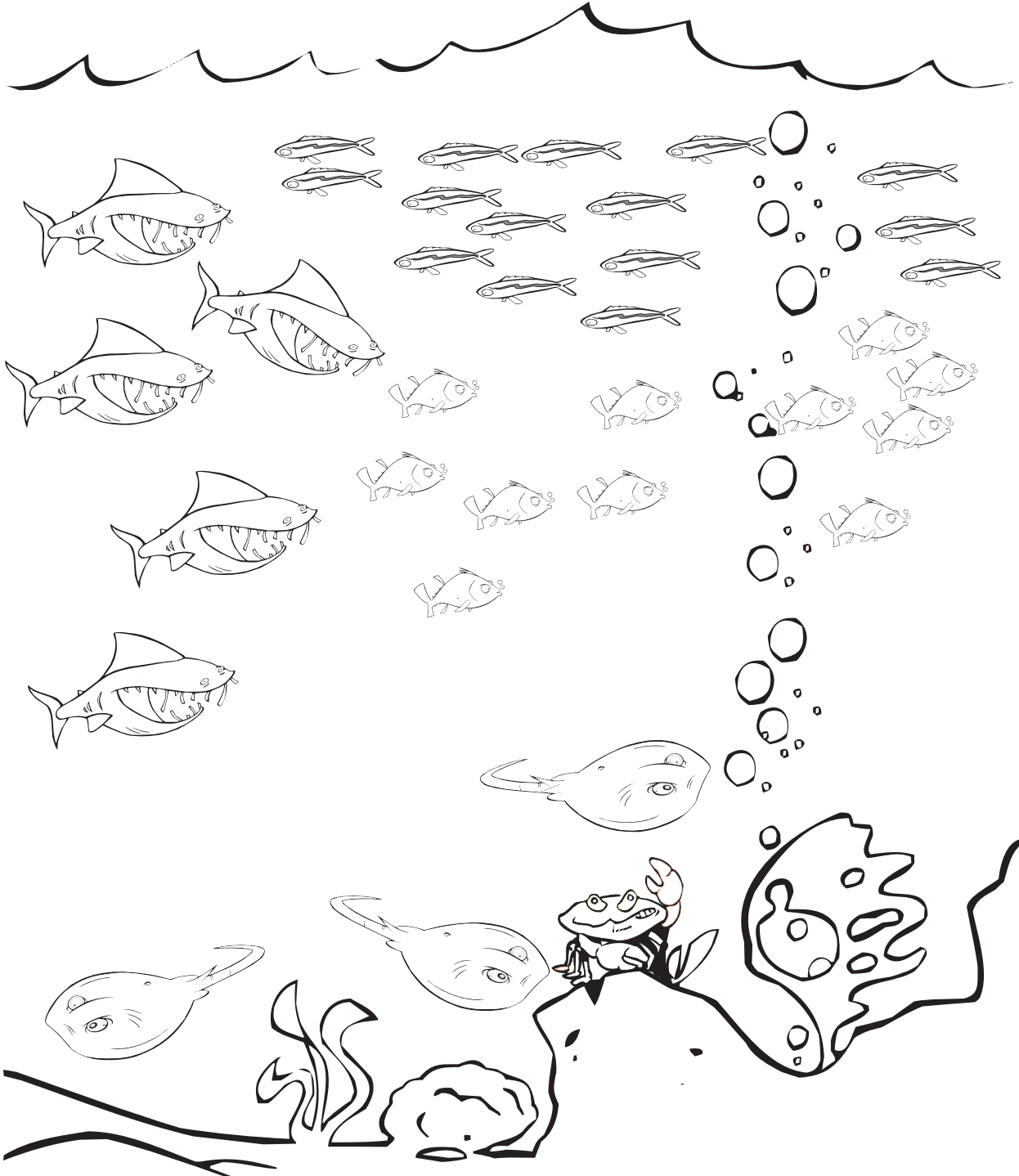
How many months in 5 years?

How many years in 365 days?

How many months in 3 years?

STATISTICS

Handling Data



Count all the fish on the previous page then complete the tally chart

Snapper Fish



Tallies



Totals

.....

Stripe Back



.....

School Sally



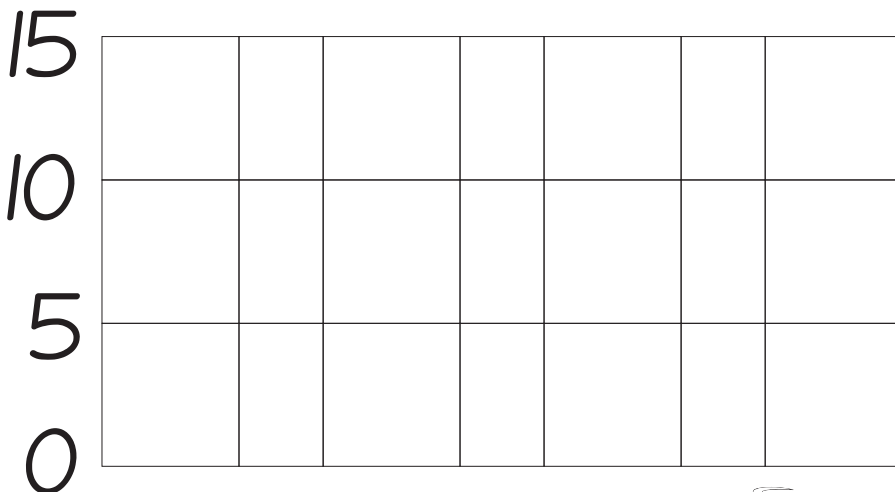
.....

Mud Ray



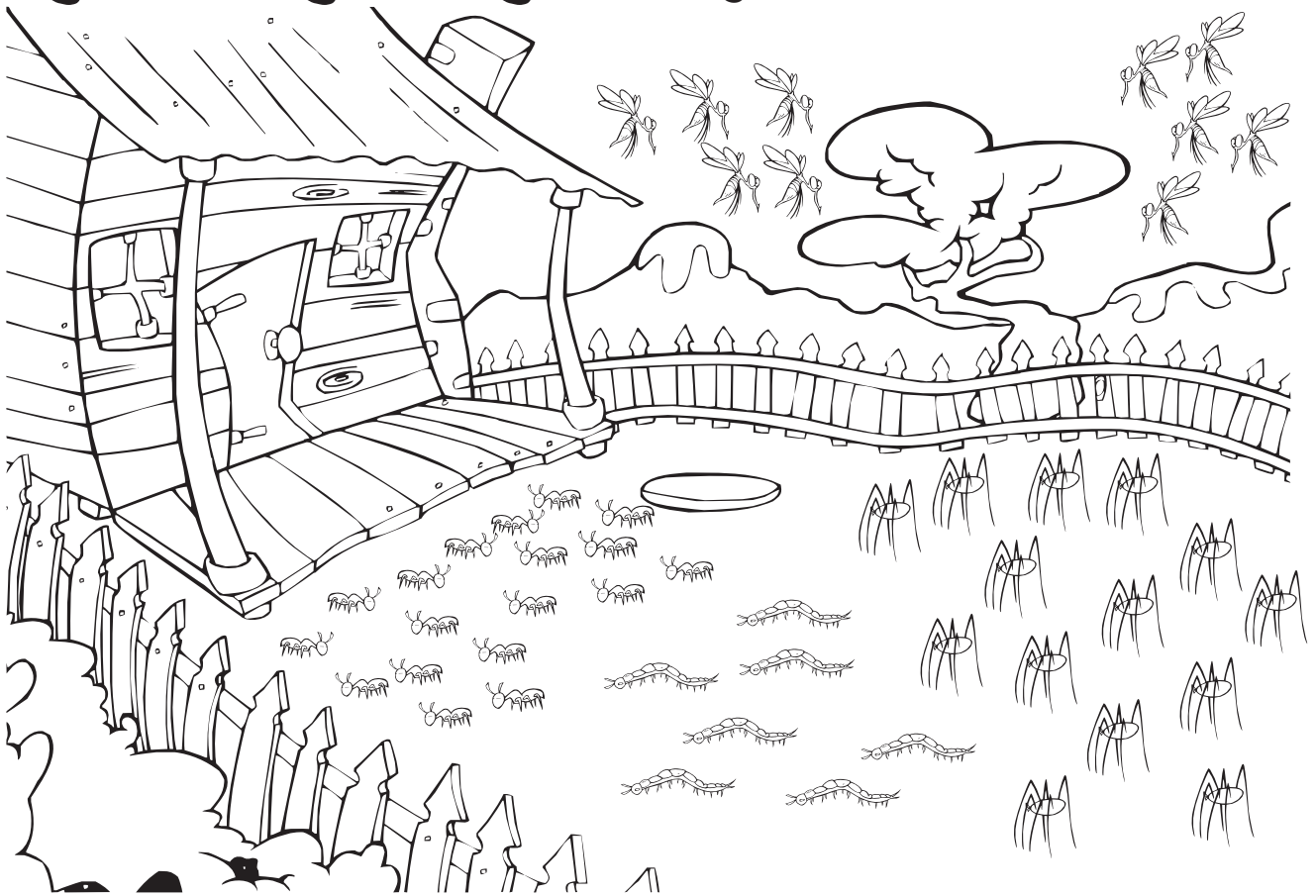
.....

Use the grid below to draw a bar graph of the fish survey results.



STATISTICS

Handling Data



Tallies

Totals

Mossie Vultures



10

.....

Wiggly Caterpillars



.....

Large Legs



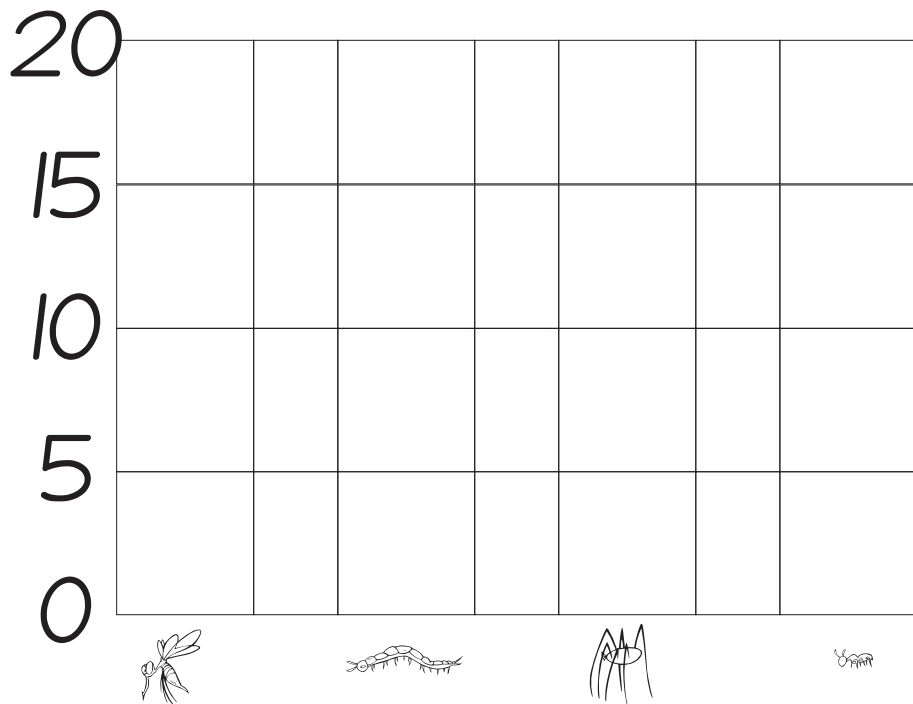
.....

Monster Ants




.....

Use the grid below to draw a bar graph of the insects in the garden



Read this table.

	Quack	Ruff
Favourite Food	Worms on toast 	Bone Crunch
Favourite Sport	Swimming	Throw that stick
Favourite TV Programme	Solid Gold Quacks	Dog Idol

Quack's favourite sport is

.....'s favourite TV programme is Dog Idol.

STATISTICS

Handling Data

Sometimes it is useful to group data.
Write each of these products into the correct category.

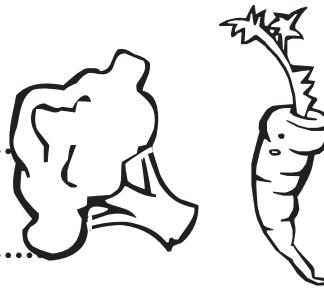
Dairy Products

.....
.....
.....



Vegetables

.....
.....
.....



Fruit

.....
.....
.....



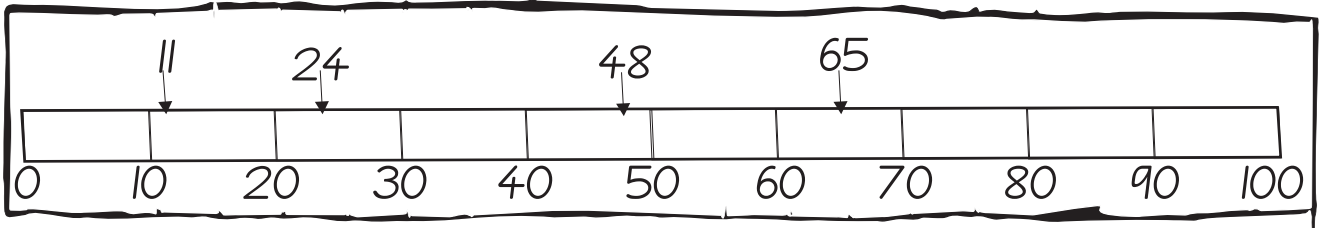
Meat Products

.....
.....
.....



- yoghurt
- potato
- ice cream
- beef
- broccoli
- apple
- peach
- cheese
- carrots
- veal
- milk
- grapes
- beans
- chicken
- pork
- butter

ROUNDING



Round these numbers to the nearest ten.

11.....10 24.....20 48.....50 65.....70

5..... 17..... 36.....

52..... 73..... 88.....

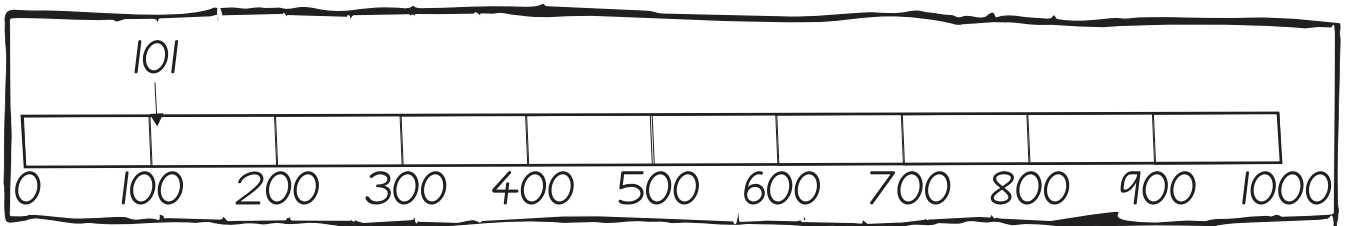
45..... 69..... 94.....

Round these numbers to the nearest hundred. Put each number on the approximate place on the number line below.

101..... 125..... 275.....

480..... 350..... 549.....

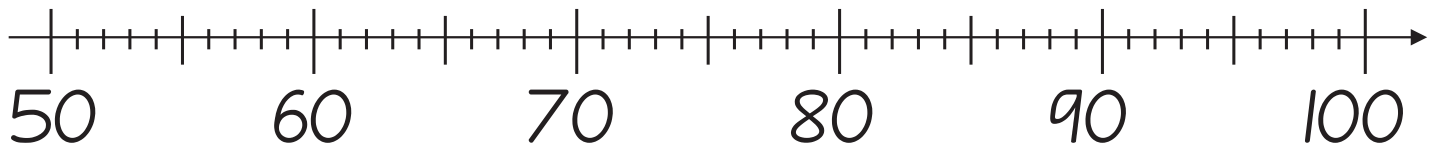
721..... 688..... 950.....



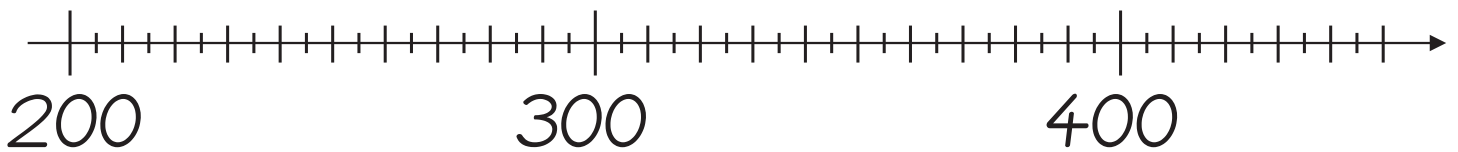
ROUNDING

Indicate each number with a dot and a the letter on one of the number lines.

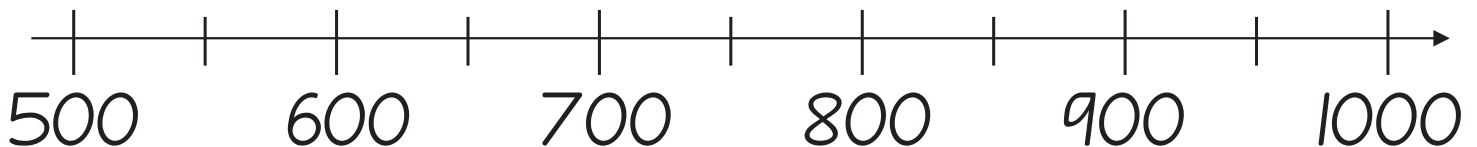
A = 76, B = 92, C = 55, D = $90\frac{1}{2}$



E = 205, F = 260, G = 351, H = 438



I = 575, J = 660, K = 805, H = 998

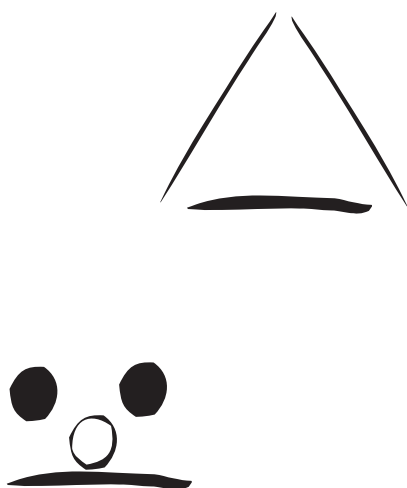






Round the numbers.

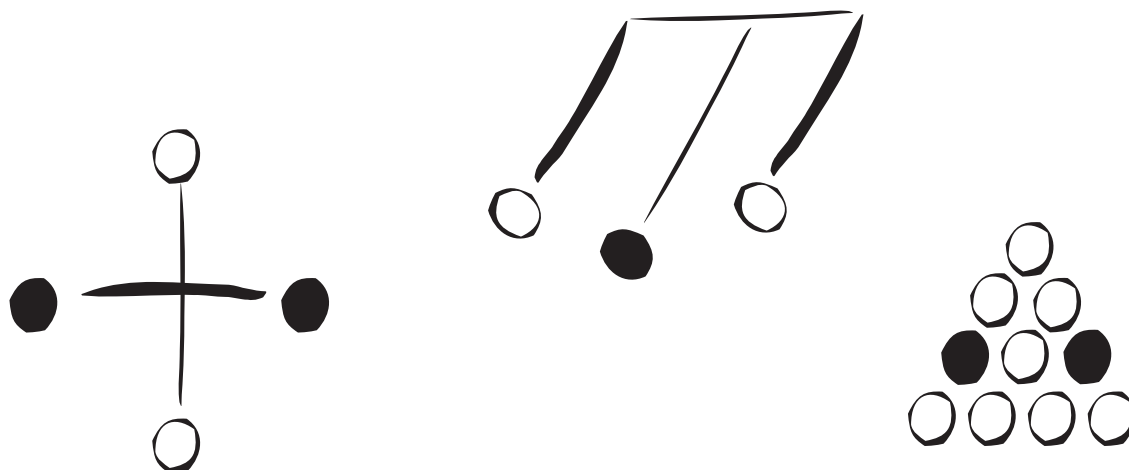
	<i>Rounded to the nearest</i>		
	<i>10</i>	<i>100</i>	<i>1000</i>
55			
463			
687			
998			

ADDING UP

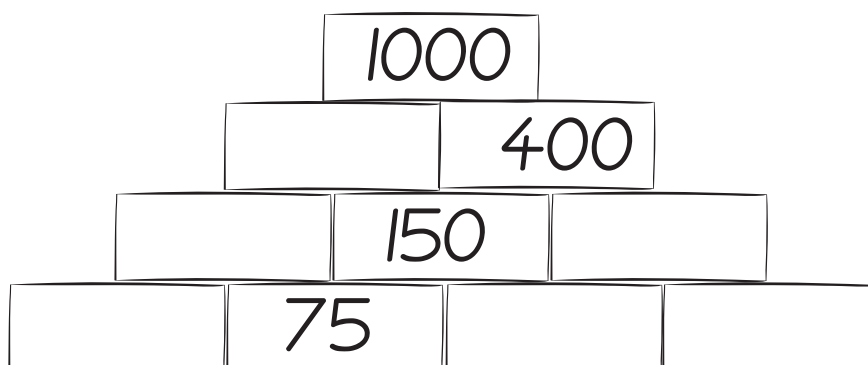
Use the key to work out the values of each shape.



KEY	
	is worth 80
	is worth 60
	is worth 40
	is worth 20

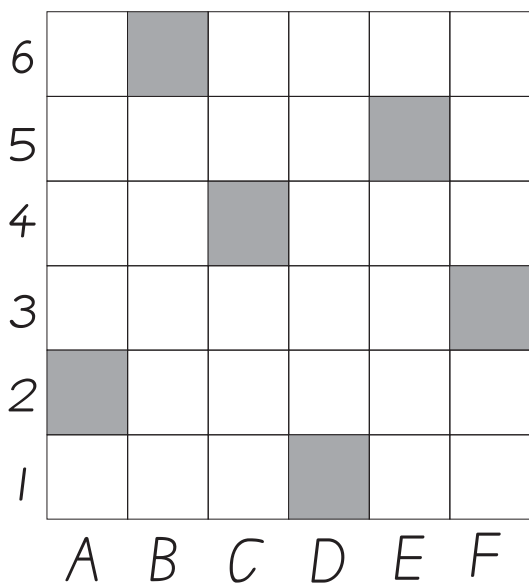


The sum of any two adjacent numbers is the number directly above. Fill in the missing numbers.



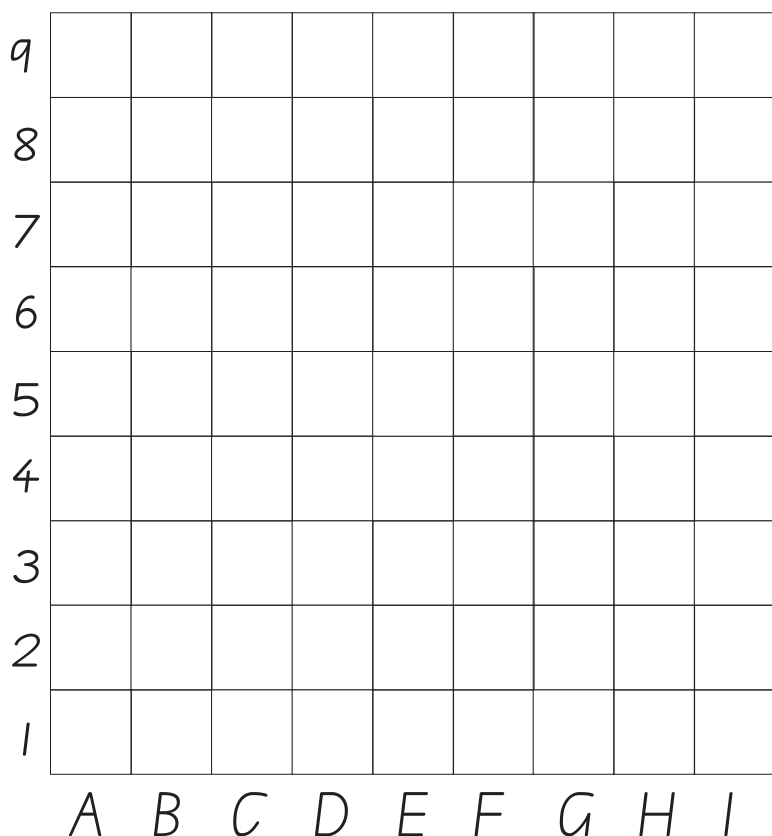
GRID POSITIONS

Write the positions of the shaded squares.



.....

Shade in these squares.



A3, E4, H8
 F6, B2, E5
 C1, G7, I9
 D2, D3

CALCULATIONS

Fill in the missing digits.

$$\begin{array}{r}
 \square 4 3 \\
 + 7 \square 2 \\
 \hline
 8 7 \square
 \end{array}$$

$$\begin{array}{r}
 3 \square 4 \\
 + \square 0 \square \\
 \hline
 9 6 3
 \end{array}$$

$$\begin{array}{r}
 7 2 \square \\
 + 1 \square 6 \\
 \hline
 \square 2 1
 \end{array}$$

$$\begin{array}{r}
 \square 3 3 \\
 - 5 2 \square \\
 \hline
 4 1 0
 \end{array}$$

$$\begin{array}{r}
 6 2 5 \\
 - \square 4 \square \\
 \hline
 4 \square 2
 \end{array}$$

$$\begin{array}{r}
 3 2 1 \\
 - 1 \square \square \\
 \hline
 \square 7 4
 \end{array}$$

$$5 \times \square = 40$$

$$5 \times \square = 400$$

$$3 \times \square = 21$$

$$3 \times \square = 210$$

$$9 \times \square = 36$$

$$9 \times \square = 360$$

$$6 \times \square = 48$$

$$6 \times \square = 480$$

MAKING A DOLLAR

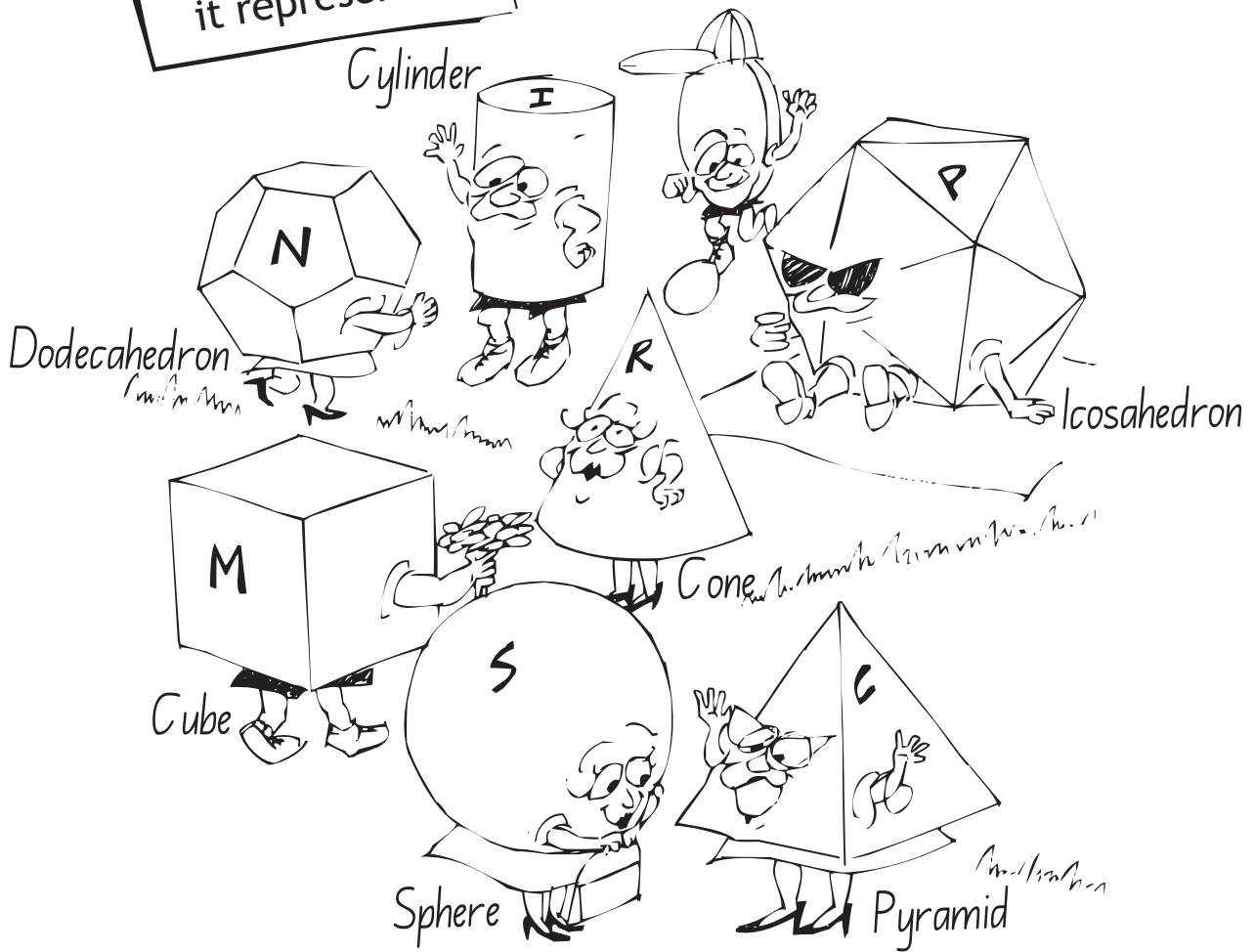
How much must be added to each amount to make \$1?



SHAPES



Write the correct letter above the prism it represents.



Icosahedron	Cone	Cylinder	Sphere	Cube		Icosahedron	Cylinder	Pyramid	Dodecahedron	Cylinder	Pyramid

NUMBERS

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	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	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1 2 3
11 12 13
21 22 23

21 25
31 32 33 34 35
41 45

48 49 50
59
69 70
79
88 89 90

57 58 59 60
66 69 70
76 79 80
86 89 90

74
84 85 86 87
97 98

32 37
42 45 46 47
52 53 54 55

5

NUMBERS

Mark these numbers on the number line.

25, 50, 75

10, 40, 70

5, 2.5, 8

Estimate these markings

6

PLACE VALUE

Write the correct number, then write the number in words.

248 two hundred and forty eight

136 one hundred and thirty six

675 six hundred and seventy five

319 three hundred and nineteen

401 four hundred and one

520 five hundred and twenty

753 seven hundred and fifty three

129 one hundred and twenty nine

7

Write down these in number form.

ninety three 93

two hundred and forty seven 247

five hundred and one 501

six hundred and eight 608

Split these numbers into hundreds, tens and units.

124 = $\boxed{100} + \boxed{20} + \boxed{4}$

75 = $\boxed{0} + \boxed{70} + \boxed{5}$

963 = $\boxed{900} + \boxed{60} + \boxed{3}$

808 = $\boxed{800} + \boxed{0} + \boxed{8}$

743 = $\boxed{700} + \boxed{40} + \boxed{3}$

519 = $\boxed{500} + \boxed{10} + \boxed{9}$

8

NUMBERS TO 1000

Which numbers have been labelled?

a = 314 three hundred and fourteen

b = 322 three hundred and twenty two

c = 339 three hundred and thirty nine

d = 345 three hundred and forty five

e = 357 three hundred and fifty seven

f = 363 three hundred and sixty three

g = 371 three hundred and seventy one

h = 386 three hundred and eighty six

i = 399 three hundred and ninety nine

9

NUMBERS

Write the biggest and smallest numbers that you can using each of these three digits.

4, 7, 1 741 147

5, 8, 2 852 258

3, 2, 7 732 237

7, 6, 8 876 678

1, 0, 9 910 019

0, 3, 0 300 003

Sort these numbers into the right order.

848, 425, 314, 616, 858
314, 425, 616, 848, 858

662, 686, 683, 648, 678
648, 662, 678, 683, 686

Mark on the number line the numbers 200, 400, 600 and 800.

Mark on the number line the numbers 430, 443, 455, 478.

10

HUNDREDS TENS and UNITS

675 is $\boxed{600} + \boxed{70} + \boxed{5}$

864 is $\boxed{800} + \boxed{60} + \boxed{4}$

942 is $\boxed{900} + \boxed{40} + \boxed{2}$

310 is $\boxed{300} + \boxed{10} + \boxed{0}$

Adding and subtracting big numbers.

942 295 368 314 451
- 621 - 152 - 147 + 254 + 523

321 143 221 568 974

437 243 317 555
+ 122 + 714 - 105 - 453

559 957 212 102

11

ADDITION

Write down the number that each picture represents then add.

323

145

323 + 145 = 468

211

138

211 + 138 = 349

12

253 + 333 = 586

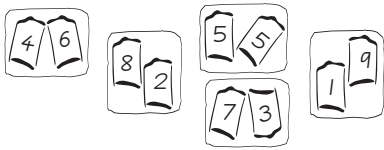
112 + 145 = 257

422 + 222 = 644

13

ADDITION Using Mental Strategies

Fill in all the pairs of numbers needed to add to 10.



Find pairs that add to 10 to help you answer.

$$2 + 8 + 1 + 9 = 20$$

$$1 + 8 + 9 + 6 + 2 + 4 + 5 = 35$$

$$4 + 2 + 2 + 3 + 6 + 8 = 25$$

$$8 + 1 + 4 + 7 + 3 + 6 = 29$$

Do these sums by treating the 9 as a 10 and subtracting the extra 1 at the end.

$$8 + 9 = 8 + 10 - 1 = 17$$

$$15 + 9 = 24 \quad 29 + 9 = 38$$

$$37 + 9 = 46 \quad 86 + 9 = 95$$

$$58 + 9 = 67 \quad 72 + 9 = 81$$

$$44 + 9 = 53 \quad 63 + 9 = 72$$

14

ARITHMETIC Using Mental Strategies

Complete these sums by partitioning.

Look at this example:

$$73 - 5 = 60 + 13 - 5$$

$$= 60 + 8 = 68$$

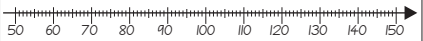
$$28 - 9 = 19 \quad 51 - 4 = 47$$

$$42 - 7 = 35 \quad 63 - 5 = 58$$

$$35 - 6 = 29 \quad 74 - 8 = 66$$

15

Use the number lines to calculate these additions.



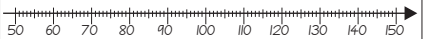
$$68 + 75 = 143$$



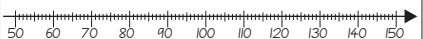
$$103 + 28 = 131$$



$$88 + 47 = 135$$



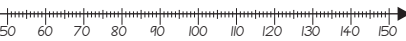
$$56 + 66 = 122$$



$$97 + 17 = 114$$

17

Use the number lines to calculate these subtractions.



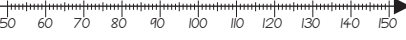
$$145 - 117 = 28$$



$$145 - 78 = 67$$



$$132 - 59 = 73$$



$$127 - 32 = 95$$



$$126 - 66 = 60$$

19

MORE ARITHMETIC

$$39 + 15 = 54 \quad 35 - 18 = 17$$

$$28 + 35 = 63 \quad 42 - 9 = 33$$

$$42 + 29 = 71 \quad 56 - 27 = 29$$

$$27 + 33 = 60 \quad 48 - 29 = 19$$

$$35 + 47 = 82 \quad 41 - 16 = 25$$

$$18 + 44 = 62 \quad 82 - 35 = 47$$

$$26 + 38 = 64 \quad 73 - 14 = 59$$

$$33 + 59 = 92 \quad 56 - 41 = 15$$

$$28 + 48 = 76 \quad 78 - 33 = 45$$

$$54 + 47 = 101 \quad 65 - 24 = 41$$

20

21

UNDERSTANDING \times and \div

Complete these.

$$2+2+2 \text{ can be written as } 4 \times 2 = 8$$

$$3+3+3+3 \text{ can be written as } 6 \times 3 = 18$$

$$5+5+5+5+5+5+5 \text{ can be written as } 10 \times 5 = 50$$

$$6+6+6+6+6+6+6 \text{ can be written as } 8 \times 6$$

$$8+8+8 \text{ can be written as } 3 \times 8$$

Complete these.

$$6 + 6 + 6 + 6 = 24 \text{ can be written as } 24 \div 6 = 4$$

$$11 + 11 + 11 + 11 = 44 \text{ can be written as } 44 \div 11 = 4$$

$$5 + 5 + 5 + 5 + 5 + 5 = 35 \text{ can be written as } 35 \div 5 = 7$$

$$3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 27 \text{ can be written as } 27 \div 3 = 9$$

$$7 + 7 + 7 + 7 + 7 + 7 + 7 = 56 \text{ can be written as } 56 \div 7 = 8$$

50 pieces of bread, 5 seagulls.
How much bread for each seagull? **10 pieces**

22

MULTIPLICATION STRATEGIES

Use easy sums to calculate harder sums.

$$6 \times 14 = 6 \times 7 \times 2 = 42 \times 2 = 84$$

$$7 \times 24 = 7 \times 12 \times 2 = 84 \times 2 = 168$$

$$3 \times 22 = 3 \times 11 \times 2 = 33 \times 2 = 66$$

$$5 \times 16 = 5 \times 8 \times 2 = 40 \times 2 = 80$$

$$9 \times 18 = 9 \times 9 \times 2 = 81 \times 2 = 162$$

$$15 \times 20 = 15 \times 10 \times 2 = 150 \times 2 = 300$$

23

$$35 \times 3 \text{ is the same as } 30 \times 3 = 90$$

$$+ 5 \times 3 = 15$$

$$105$$

Now try these

$$24 \times 6 = 20 \times 6 = 120$$

$$4 \times 6 = 24$$

$$144$$

$$18 \times 5 = 10 \times 5 = 50$$

$$8 \times 5 = 40$$

$$90$$

$$32 \times 4 = 30 \times 4 = 120$$

$$2 \times 4 = 8$$

$$128$$

$$46 \times 3 = 40 \times 3 = 120$$

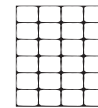
$$6 \times 3 = 18$$

$$138$$

24

MULTIPLYING

Both examples show 6×4



$$6 \times 4 = 24$$

Now try these

$$6 \times 40 = 240$$

$$6 \times 400 = 2400$$



$$7 \times 3 = 21 \quad 7 \times 30 = 210 \quad 7 \times 300 = 2100$$

$$4 \times 8 = 32 \quad 4 \times 80 = 320 \quad 4 \times 800 = 3200$$

$$3 \times 5 = 15 \quad 3 \times 50 = 150 \quad 3 \times 500 = 1500$$

$$8 \times 2 = 16 \quad 8 \times 20 = 160 \quad 8 \times 200 = 1600$$

25

MULTIPLYING

$$6 \times 24 = \begin{array}{|c|c|c|c|c|c|} \hline \square & \square & \square & \square & \square & \square \\ \hline \square & \square & \square & \square & \square & \square \\ \hline \end{array}$$

This is the same as $6 \times 20 = 120$

$$+ 6 \times 4 = 24$$

$$= 144$$

Now try these

$$4 \times 41$$

$$2 \times 53$$

$$4 \times 40 = 160$$

$$2 \times 50 = 100$$

$$4 \times 1 = 4$$

$$2 \times 3 = 6$$

$$= 164$$

$$= 106$$

$$3 \times 32$$

$$5 \times 27$$

$$3 \times 30 = 90$$

$$5 \times 20 = 100$$

$$3 \times 2 = 6$$

$$5 \times 7 = 35$$

$$= 96$$

$$= 135$$

26

MULTIPLYING and DIVIDING

When multiplying by 10 add a zero.
When multiplying by 100 add two zeros.

$$4 \times 10 = 40$$

$$6 \times 100 = 600$$

$$9 \times 10 = 90$$

$$2 \times 100 = 200$$

$$3 \times 10 = 30$$

$$9 \times 100 = 900$$

$$33 \times 10 = 330$$

$$75 \times 100 = 7500$$

$$51 \times 10 = 510$$

$$43 \times 100 = 4300$$

$$27 \times 10 = 270$$

$$68 \times 100 = 6800$$

When dividing by 10 take off a zero.
When dividing by 100 take off two zeros.

$$30 \div 10 = 3$$

$$800 \div 100 = 8$$

$$70 \div 10 = 7$$

$$700 \div 100 = 7$$

$$40 \div 10 = 4$$

$$200 \div 100 = 2$$

$$500 \div 10 = 50$$

$$3000 \div 100 = 30$$

$$430 \div 10 = 43$$

$$5400 \div 100 = 54$$

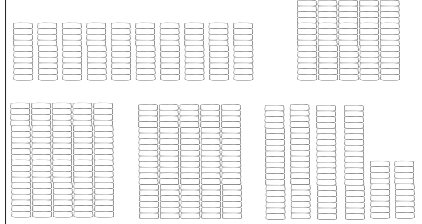
$$370 \div 10 = 37$$

$$1200 \div 100 = 12$$

27

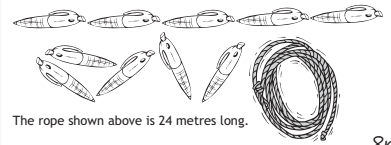
Below are 5 piles of 100 bricks.

How many bricks are there?500...



A pen is 13cm long.

If placed end on end, how long would 10 pencils measure? 130cm



The rope shown above is 24 metres long.

If it is cut into 3 equal lengths, how long will each length be? 8m

If it is cut into 4 equal lengths, how long will each length be? 6m

If it is cut into 12 equal lengths, how long will each length be? 2m

28

NUMBER PUZZLES

Find 4 different odd numbers that add up to 16.

$$1 + 3 + 5 + 7 = 16$$

Find 4 different odd numbers that add up to 20.

$$1 + 9 + 3 + 7 = 20$$

Note how each pair adds up to 10

$$1 + 9 + 2 + 8 + 3 + 7 = 30$$

There is more than one answer to the problem below. Make sure that odd numbers are joined to even numbers.

Each row must add to 10. Each column must add to 10. Do not use zero.

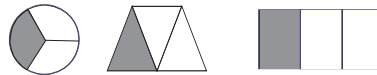
1	6	9
8	7	4
3	2	5

3	4	3
4	4	2
3	2	5

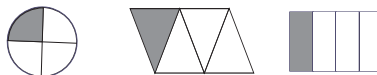
29

FRACTIONS

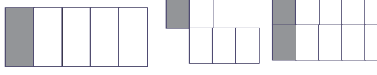
Shade $\frac{1}{3}$ of these shapes.



Shade $\frac{1}{4}$ of these shapes.



Shade $\frac{1}{5}$ of these shapes.



Shade in the fraction written next to each shape.



one half

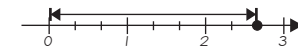
three quarters

two thirds

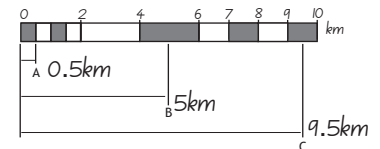
30

FRACTIONS

Illustrate the number $2\frac{2}{3}$ in 3 different ways.



Write the distances A, B and C shown on this scale.



31

What is one half of 24 bugs?

$$24 \div 2 = 12$$



What is one third of 30 mosquitos?

$$30 \div 3 = 10$$



What is one fifth of 25 butterflies?

$$25 \div 5 = 5$$

What is one quarter of 40 flies?

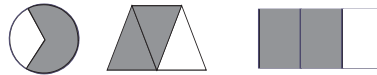
$$40 \div 4 = 10$$



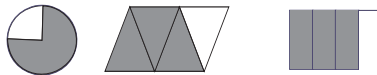
32

FRACTIONS

Shade $\frac{2}{3}$ of these shapes.



Shade $\frac{3}{4}$ of these shapes.



Shade $\frac{3}{5}$ of these shapes.



Shade $\frac{2}{3}$ of each bunch of the apples.



33

Calculate $\frac{3}{4}$ of 16.



$$16 \div 4 = 4$$

$$4 \times 3 = 12 \therefore \frac{3}{4} \text{ of } 16 = 12$$

Find the following:

$$\frac{1}{2} \text{ of } 28 = 14$$

$$\frac{3}{4} \text{ of } 20 = 15$$

$$\frac{3}{10} \text{ of } 100 = 30$$

$$\frac{2}{3} \text{ of } 24 = 16$$

$$\frac{2}{5} \text{ of } 25 = 10$$

$$\frac{9}{10} \text{ of } 40 = 36$$

34

FRACCTIONS

Some fractions are the same.

$\frac{1}{6}$ or $\frac{1}{2}$

Shade each of the fractions given.

$\frac{1}{2}$	
$\frac{2}{4}$	
$\frac{3}{6}$	
$\frac{4}{8}$	

All the fractions above are the same.
They are called equivalent fractions.

Finish these fraction additions

$\frac{3}{4} + \frac{1}{4} = 1$ $\frac{2}{3} + \frac{1}{3} = 1$

35

Finish these fraction additions.

$\frac{3}{5} + \frac{2}{5} = 1$ $\frac{5}{8} + \frac{3}{8} = 1$

If you have 6 carrots then:

3 carrots equals $\frac{1}{2}$ of the bunch.

2 carrots equals $\frac{1}{3}$ of the bunch.

4 carrots equals $\frac{2}{3}$ of the bunch.

1 carrot equals $\frac{1}{6}$ of the bunch.

36

FRACCTIONS

This is 1 unit.

Give the unit amount of each of these.

$\frac{1}{4}$ $\frac{3}{4}$ $\frac{3}{4}$ $\frac{1}{2}$ 2

Use the number lines to help you do these additions and subtractions.

$\frac{1}{2} + \frac{3}{4} + \frac{1}{2} = 1\frac{3}{4}$

$\frac{1}{2} + \frac{3}{4} + \frac{1}{4} = 1\frac{1}{2}$

$\frac{2}{3} + \frac{2}{3} + \frac{2}{3} = 2$

37

EQUIVALENT FRACTIONS

Fractions that are the same size are called equivalent fractions. Use this diagram to write as many equivalent fractions as you can.

$\frac{1}{2}$	
$\frac{1}{3}$	
$\frac{1}{4}$	
$\frac{1}{5}$	
$\frac{1}{6}$	
$\frac{1}{8}$	
$\frac{1}{10}$	
$\frac{1}{12}$	

$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$

$\frac{1}{3} = \frac{2}{6} = \frac{4}{12}$

$\frac{1}{4} = \frac{2}{8} = \frac{3}{12}$

$\frac{1}{5} = \frac{2}{10}$

$\frac{1}{6} = \frac{2}{12}$

$\frac{1}{8} = \frac{2}{16}$

$\frac{1}{10} = \frac{2}{20}$

$\frac{1}{12} = \frac{2}{24}$

38

FRACCTIONS

Write the fraction beside the correct place on the number line.

$\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{3}$ $\frac{1}{4}$

On the number line label the points: $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and $\frac{4}{5}$.

Find these fractions using the diagram on page 38. Write these fractions in order of size.

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

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

39

MONEY

Use these coins to make \$5. There are three different ways.

Fill in the missing coins.

$50 + 20 = \$70$

$50 + 50 = \$100$

$50 + 50 + 50 = \$150$

$50 + 50 + 20 = \$120$

40

MONEY

Draw a line to show each equivalent total.

\$1.00

\$2.50

\$6.30

\$5

41

MEASUREMENT

Taking Readings

What units would you use to measure the lengths of following?

mm, cm, m, km

ant table height plane distance

mm cm m km

How long is each centipede?

35mm 50mm

How much liquid in each beaker?

350ml 225ml 475ml

42

MEASUREMENT

Taking Readings

Weights
For small weights use grams (g), for average weights use kilograms (kg) and for really heavy weights use tonnes.
1 kg = 1000 g
1 tonne = 1000 kg

Liquids
litres (l)
millilitres (ml)
1 litre = 1000 ml

To measure lengths use metres (m) centimetres (cm) or millimetres (mm)
For long distances use kilometres (km)
1 cm = 10 mm
1 m = 100 cm
1000m = 1 km

Which units would you use to measure...
The weight of a train? tonnes
The length of a mouse? mm
The amount of water in a swimming pool? litres
The distance from Auckland to Melbourne? km
The weight of a person? kg

A large milk carton holds 2000 ml of milk.
How many litres is this? 2

A cereal box weighs $\frac{1}{2}$ a kilogram.
How many grams is this? 500g

43

MEASUREMENT

Taking Readings

Shade in the last beaker so that there is a total of 1 litre (1000 ml)

100 + 450 + 50 + 250 + 150

Write these lengths in centimetres.

1 metre = 100 cm
5 m = 500 cm
10 mm = 1 cm
1 cm = 10 mm

3 m = 300 cm
100 mm = 10 cm
20 m = 2000 cm
30 mm = 3 cm
1.5 m = 150 cm
55 mm = 5.5 cm

Weights and Liquids

1 kg = 1000 grams
1 tonne = 1000 Kilograms
1 litre = 1000 millilitres

Convert these measurements.

5 litres = 5000 ml
1.25 litres = 1250 ml
3 tonnes = 3000 kg
2.5 kg = 2500 g

44

TIME

Write the time on each clock.

4:50 Ten to five
7:45 Quarter to eight
8:15 Quarter past eight
6:05 Five minutes past six

How many ...

How many seconds in 3 minutes? 180 sec
How many minutes in 5 hours? 300 min
How many hours in 2 days? 48 hrs...
How many months in 5 years? 60 mths
How many years in 365 days? 1 year...
How many months in 3 years? 36 mths

45

Count all the fish on the previous page then complete the tally chart

Fish	Tallies	Totals
Snapper Fish		5
Stripe Back		15
School Sally		11
Mud Ray		3

Use the grid below to draw a bar graph of the fish survey results.

47

STATISTICS

Handling Data

Animal	Tallies	Totals
Mossie Vultures		10
Wiggly Caterpillars		7
Large Legs		14
Monster Ants		18

48

Use the grid below to draw a bar graph of the insects in the garden

Read this table.

	Quack	Ruff
Favourite Food	Worms on toast	Bone Crunch
Favourite Sport	Swimming	Throw that stick
Favourite TV Programme	Solid Gold Quacks	Dog Idol

Quack's favourite sport is Swimming...
.....Ruff's favourite TV programme is Dog Idol.

49

STATISTICS

Handling Data

Sometimes it is useful to group data. Write each of these products into the correct category.

Product	Category
yogurt	Dairy Products
ice cream	Dairy Products
cheese	Dairy Products
butter	Dairy Products
milk	Dairy Products
potato	Vegetables
broccoli	Vegetables
carrots	Vegetables
beans	Vegetables
apple	Fruit
peach	Fruit
grapes	Fruit
beef	Meat Products
veal	Meat Products
chicken	Meat Products
pork	Meat Products
butter	Dairy Products

50

ROUNDING

Round these numbers to the nearest ten.

11...10 24...20 48...50 65...70
5...10 17...20 36...40
52...50 73...70 88...90
45...50 69...70 94...90

Round these numbers to the nearest hundred. Put each number on the approximate place on the number line below.

101...100 125...100 275...300
480...500 350...400 549...500
721...700 688...700 950...1000

51

ROUNDING

Indicate each number with a dot and a letter on one of the number lines.

A = 76, B = 92, C = 55, D = 90½

E = 205, F = 260, G = 351, H = 438

I = 575, J = 660, K = 805, L = 998

Round the numbers.

	Rounded to the nearest		
	10	100	1000
55	60	100	0
463	460	500	0
687	690	700	1000
998	1000	1000	1000

52

ADDING UP

Use the key to work out the values of each shape.

Shape	Value
Triangle	is worth 80
Rectangle	is worth 60
Circle	is worth 40
Square	is worth 20

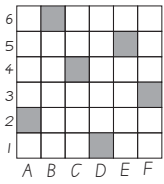
The sum of any two adjacent numbers is the number directly above. Fill in the missing numbers.

1000			
600	400		
450	150	250	
375	75	75	175

53

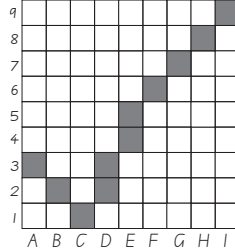
GRID POSITIONS

Write the positions of the shaded squares.



A2, B6, C4
D1, E5, F3

Shade in these squares.



A3, E4, H8
F6, B2, E5
C1, G7, I9
D2, D3

54

CALCULATIONS

Fill in the missing digits.

$$\begin{array}{r} 143 \\ + 732 \\ \hline 875 \end{array} \quad \begin{array}{r} 354 \\ + 609 \\ \hline 963 \end{array} \quad \begin{array}{r} 725 \\ + 196 \\ \hline 921 \end{array}$$

$$\begin{array}{r} 933 \\ - 523 \\ \hline 410 \end{array} \quad \begin{array}{r} 625 \\ - 143 \\ \hline 482 \end{array} \quad \begin{array}{r} 321 \\ - 147 \\ \hline 174 \end{array}$$

$5 \times \boxed{8} = 40 \quad 5 \times \boxed{80} = 400$

$3 \times \boxed{7} = 21 \quad 3 \times \boxed{70} = 210$

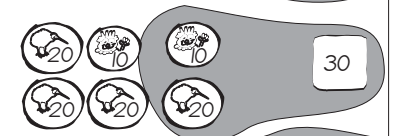
$9 \times \boxed{4} = 36 \quad 9 \times \boxed{40} = 360$

$6 \times \boxed{8} = 48 \quad 6 \times \boxed{80} = 480$

55

MAKING A DOLLAR

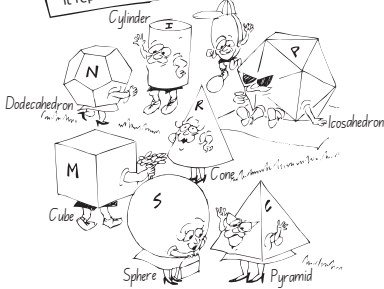
How much must be added to each amount to make \$1?



56

SHAPES

Write the correct letter above the prism it represents.



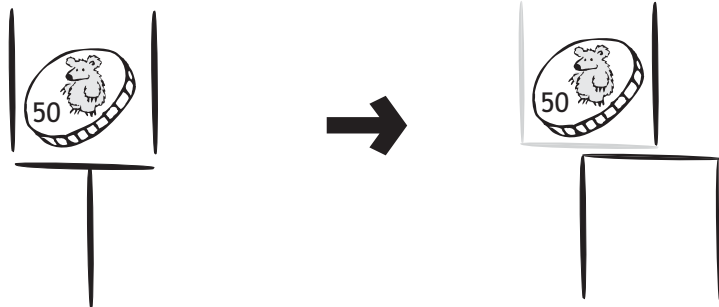
P	R	I	S	M	P	I	C	N	I	C
dodecahedron	cone	cylinder	sphere	cube	dodecahedron	cylinder	pyramid	dodecahedron	cylinder	pyramid

57

FUN WITH PUZZLES

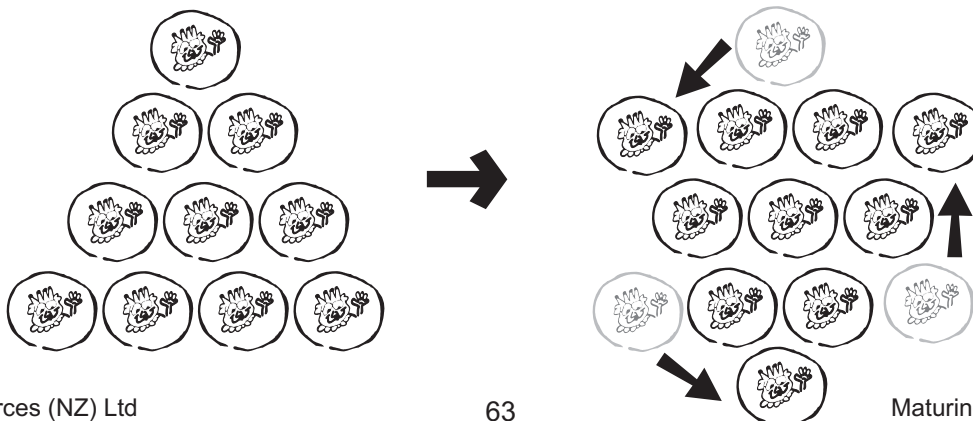
The Coin in the Glass

Four toothpicks are used to form a glass. A coin is in the glass. You must get the coin out of the glass by only moving two toothpicks.



Ten Coins

Arrange ten coins as shown. By moving only 3 coins form another triangle that is upside down.



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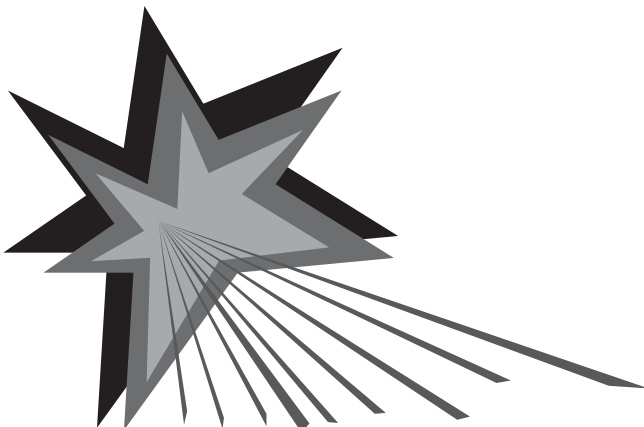
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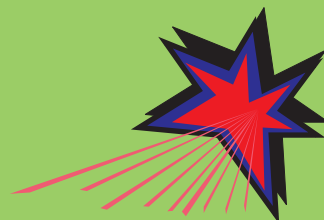
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