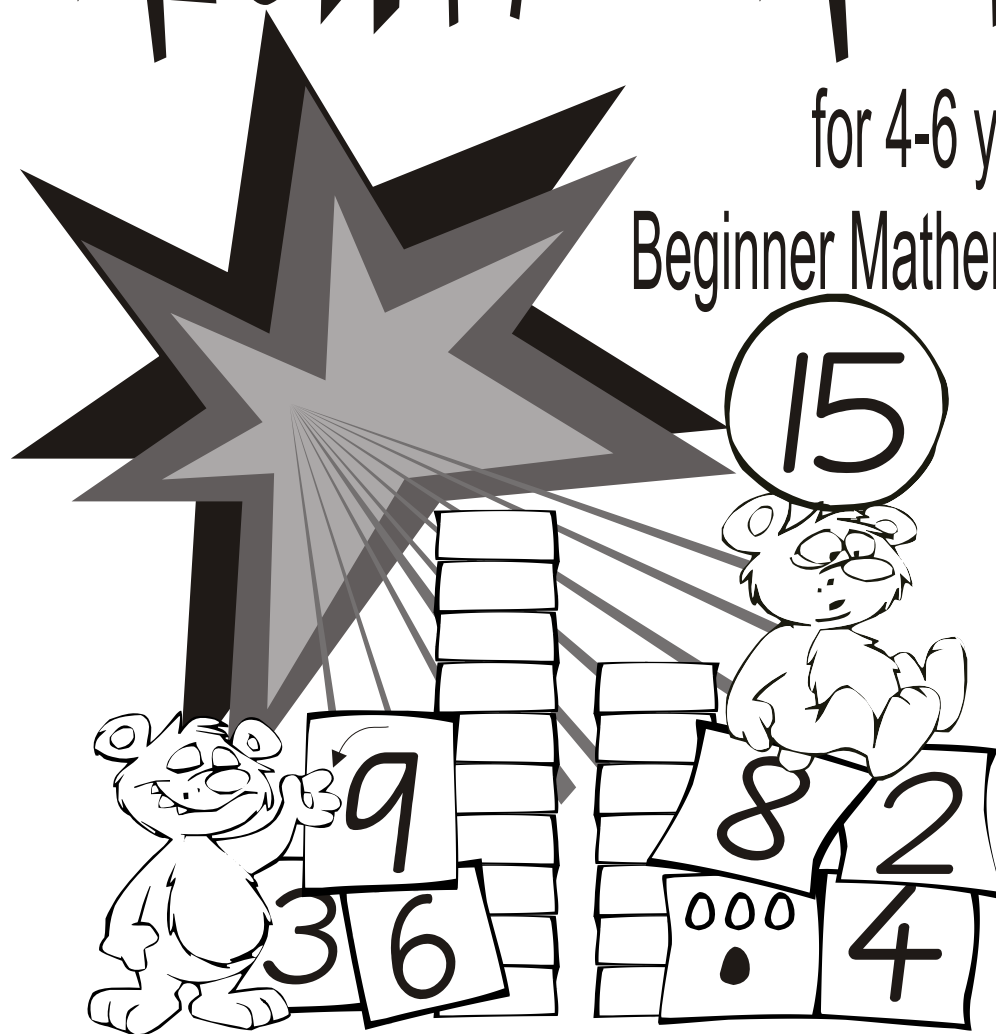


# NIGHTY MATHS

for 4-6 year olds

Beginner Mathematician



Introducing

# MATHEMATICS

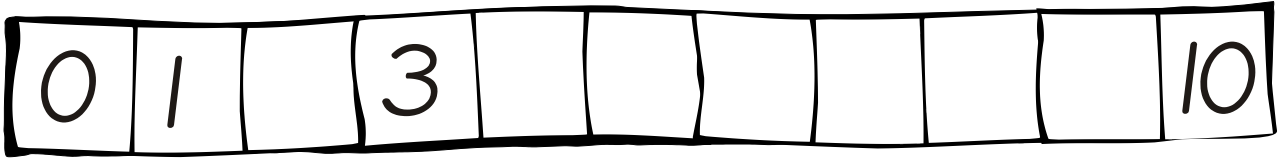
Kim Freeman

**Part** 3, Introducing Addition and Subtraction




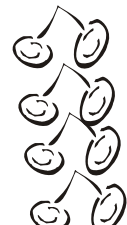

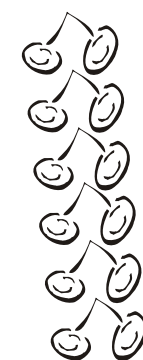
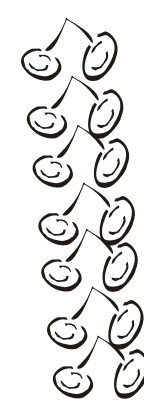


# Numbers and Number Sequences.








Complete the numbers in the number line.



Count the cherries.

						
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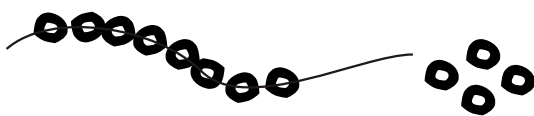
  

						
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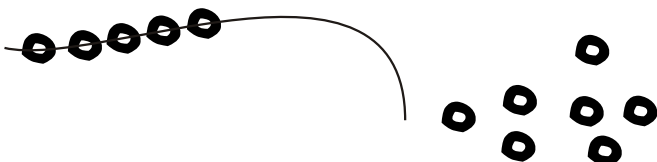
There were 12 beads on each piece of string.

Some beads have fallen off.

Write a subtraction sum for each.



$$12 - 4 = \dots\dots\dots$$

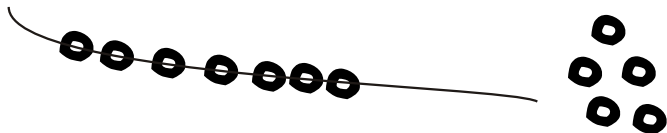


$$12 - 7 = \dots\dots\dots$$

# Adding and Subtracting.

There were 12 beads on each piece of string.  
Some beads have fallen off.

Write a subtraction sum for each.

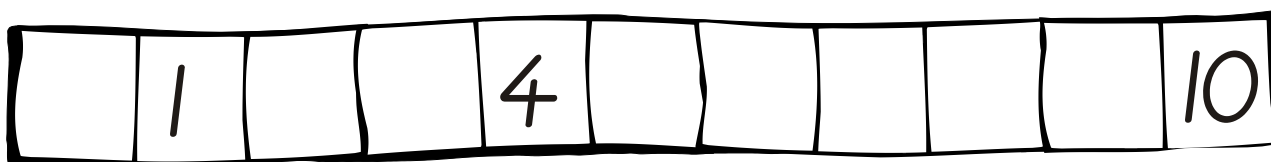


$$12 - 5 = \dots\dots\dots$$



$$12 - 9 = \dots\dots\dots$$

Complete the numbers in the number line.



Left

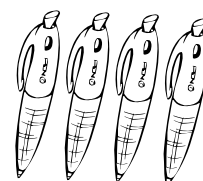
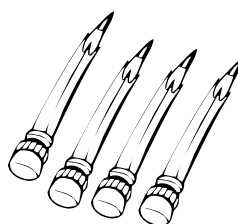
Right

Use the number line to show where you end up if:

- from 9, you move 3 to the left.                   .....
- from 3, you move 2 to the right.                   .....
- from 7, you move 5 to the left.                   .....
- from 2, you move 8 to the right.                   .....
- from 6, you move 6 to the left.                   .....
- from 5, you move 4 to the right.                   .....

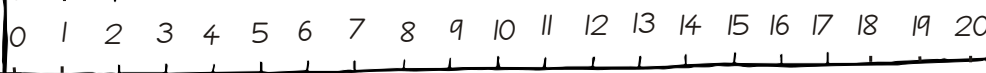
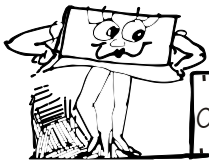
Write an addition sum for the number of pens and pencils.

$$\dots\dots\dots + \dots\dots\dots = \dots\dots\dots$$



Adding.

$$11 + 2 = 13$$



Add 2 to these numbers.

$9 + 2 = \dots\dots\dots$

$15 + 2 = \dots\dots\dots$

$7 + 2 = \dots\dots\dots$

$10 + 2 = \dots\dots\dots$

$14 + 2 = \dots\dots\dots$

$9 + 2 = \dots\dots\dots$

$18 + 2 = \dots\dots\dots$

$12 + 2 = \dots\dots\dots$

$5 + 2 = \dots\dots\dots$

$17 + 2 = \dots\dots\dots$

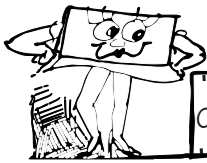
Complete these addition strips.

add	10	5	13	9	6	16	8	17	12
3	13								

add	12	7	14	10	16	11	9	13	15
4	16								

Adding.

$$13 + 3 = 16$$



Complete these additions.

$7 + 4 = \dots\dots\dots$

$9 + 3 = \dots\dots\dots$

$12 + 4 = \dots\dots\dots$

$16 + 2 = \dots\dots\dots$

$11 + 3 = \dots\dots\dots$

$14 + 5 = \dots\dots\dots$

$13 + 4 = \dots\dots\dots$

$18 + 2 = \dots\dots\dots$

$15 + 4 = \dots\dots\dots$

$13 + 2 = \dots\dots\dots$

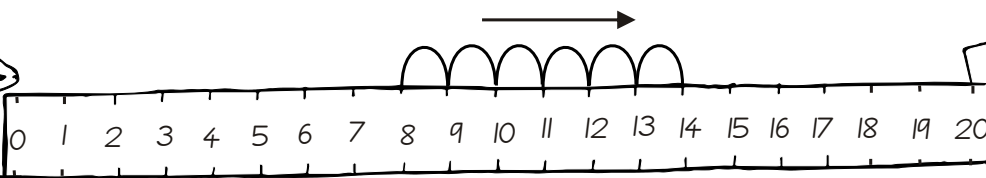
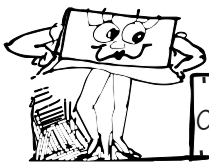
Complete these addition strips.

add	10	5	13	9	6	14	8	1	12
5 ↓	15								

add	12	7	14	10	16	11	9	13	15
2 ↓	14								

Adding.

$$8 + 6 = 14$$



Complete these additions.

$9 + 4 = \dots\dots\dots$

$14 + 5 = \dots\dots\dots$

$8 + 4 = \dots\dots\dots$

$12 + 6 = \dots\dots\dots$

$11 + 5 = \dots\dots\dots$

$13 + 4 = \dots\dots\dots$



$10 + 6 = \dots\dots\dots$

$12 + 7 = \dots\dots\dots$


$15 + 5 = \dots\dots\dots$


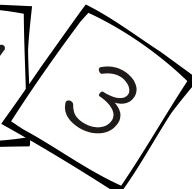
$14 + 6 = \dots\dots\dots$



Write down the total of the numbers on each pair of cards.

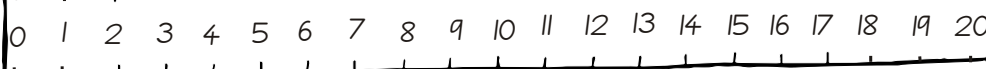
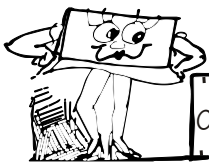
 

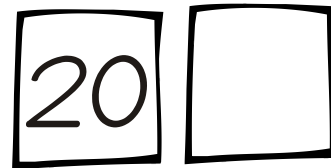
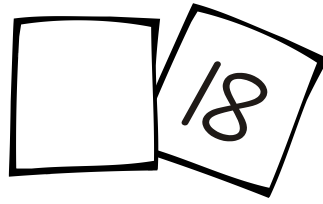
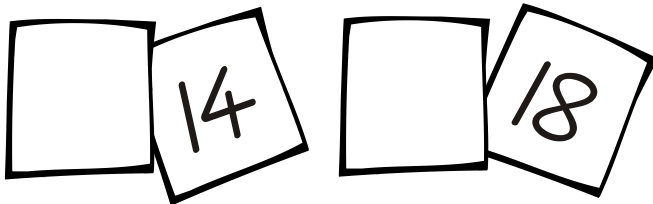
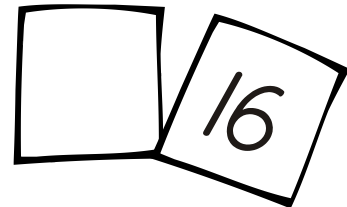
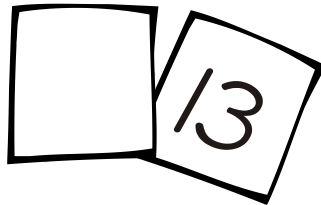
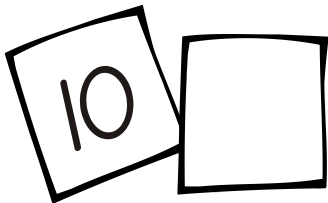
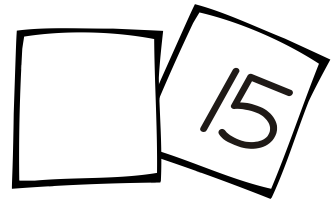
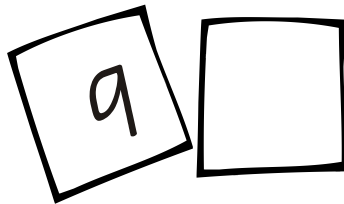
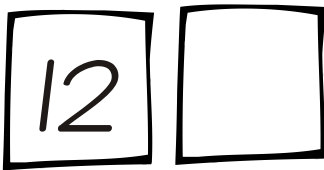
# Adding.

$$12 + 8 = 20$$



Each pair of cards should sum to total 20.

Write down the missing numbers.



Complete these additions.

$6 + 8 = \dots\dots\dots$

$8 + 8 = \dots\dots\dots$

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

$10 + 7 = \dots\dots\dots$

$11 + 7 = \dots\dots\dots$

$8 + 7 = \dots\dots\dots$

$5 + 5 = \dots\dots\dots$

$13 + 6 = \dots\dots\dots$

$7 + 8 = \dots\dots\dots$

$8 + 5 = \dots\dots\dots$



# Adding.

Draw spots on the blank cards to make the totals.

$$\begin{array}{|c|} \hline \bullet \bullet \\ \bullet \bullet \\ \bullet \bullet \\ \bullet \bullet \\ \hline \end{array} + \begin{array}{|c|} \hline \bullet \bullet \\ \bullet \bullet \\ \hline \end{array} = 12$$

$$\begin{array}{|c|} \hline \bullet \\ \bullet \\ \bullet \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \\ \\ \hline \end{array} = 10$$

$$\begin{array}{|c|} \hline \bullet \bullet \bullet \\ \bullet \bullet \bullet \\ \bullet \bullet \bullet \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \\ \\ \hline \end{array} = 15$$

$$\begin{array}{|c|} \hline \bullet \bullet \\ \bullet \bullet \\ \bullet \bullet \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \\ \\ \hline \end{array} = 14$$

$$\begin{array}{|c|} \hline \bullet \bullet \bullet \\ \bullet \bullet \bullet \\ \bullet \bullet \bullet \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \\ \\ \hline \end{array} = 11$$

$$\begin{array}{|c|} \hline \bullet \bullet \\ \bullet \bullet \\ \bullet \bullet \\ \bullet \bullet \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \\ \\ \hline \end{array} = 13$$

Complete these additions.

$$7 + 5 = \dots\dots\dots$$

$$18 + 1 = \dots\dots\dots$$

$$9 + 8 = \dots\dots\dots$$

$$13 + 7 = \dots\dots\dots$$

$$6 + 7 = \dots\dots\dots$$

$$10 + 8 = \dots\dots\dots$$

$$5 + 9 = \dots\dots\dots$$

$$12 + 5 = \dots\dots\dots$$

$$2 + 12 = \dots\dots\dots$$

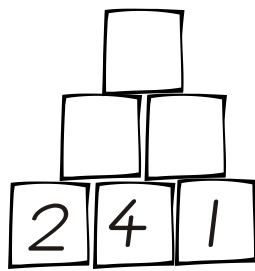
$$4 + 11 = \dots\dots\dots$$



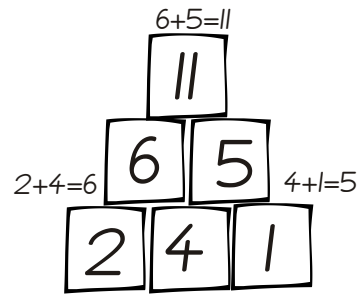
# Addition.

The following pyramids are formed by adding each of the numbers in the blocks below it.

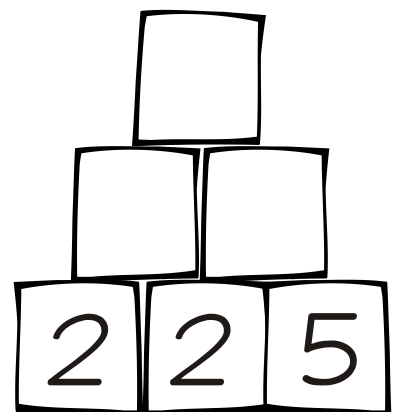
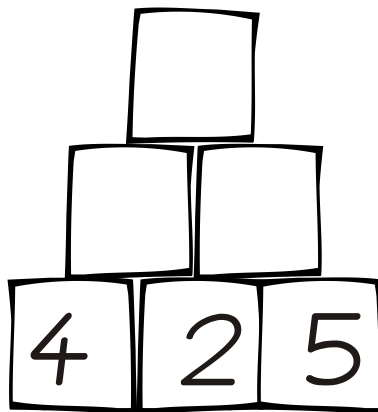
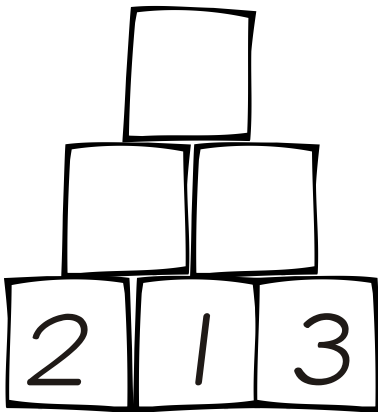
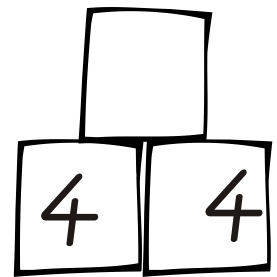
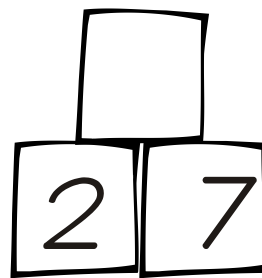
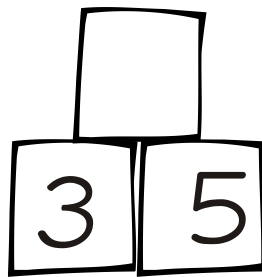
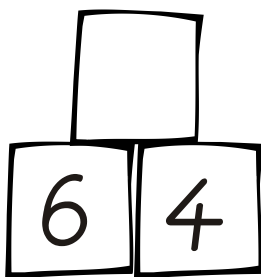
Therefore



becomes



Complete these pyramids.



Complete these additions.

$$5+3=.....$$

$$7+8=.....$$

$$3+9=.....$$

$$4+5=.....$$

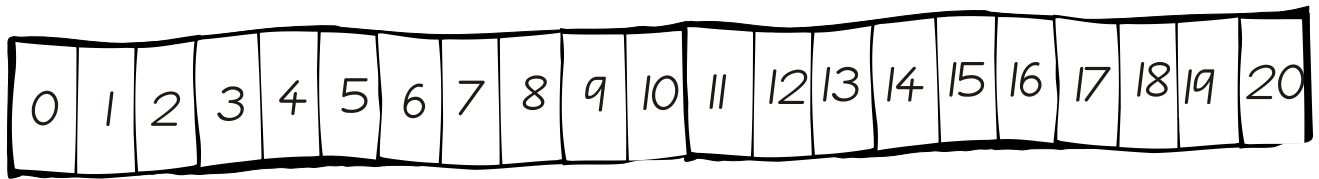
$$14+4=.....$$

$$12+7=.....$$

$$9+7=.....$$

$$2+11=.....$$

# Arithmetic.



Use the number line to show where you end up if:

- from 14, you move 3 to the left. ....
- from 17, you move 2 to the right. ....
- from 16, you move 5 to the left. ....
- from 8, you move 8 to the right. ....
- from 19, you move 6 to the left. ....
- from 11, you move 4 to the right. ....

Complete the additions by writing in the missing numbers.

$$1 + \square = 5$$

$$4 + \square = 7$$

$$\square + 3 = 13$$

$$\square + 2 = 15$$

$$6 + \square = 12$$

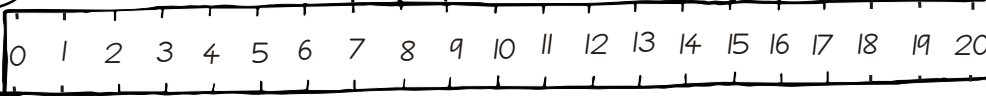
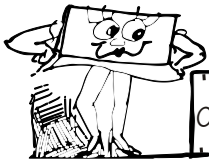
$$11 + \square = 16$$

$$\square + 4 = 10$$

$$\square + 4 = 18$$

# Subtraction.

$$9 - 2 = 7$$



Complete these subtractions.

$9 - 2 = \dots\dots\dots$

$15 - 2 = \dots\dots\dots$

$7 - 2 = \dots\dots\dots$

$10 - 2 = \dots\dots\dots$

$14 - 2 = \dots\dots\dots$

$9 - 2 = \dots\dots\dots$

$18 - 2 = \dots\dots\dots$

$12 - 2 = \dots\dots\dots$

$5 - 2 = \dots\dots\dots$

$17 - 2 = \dots\dots\dots$

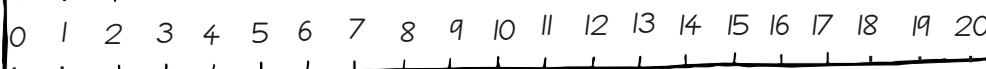
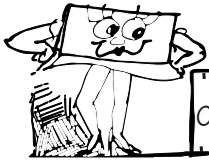
Complete these subtraction strips.

subtract 3	10	5	13	9	6	16	8	17	12
	7								

subtract 4	12	7	14	10	16	11	9	13	15
	8								

# Subtraction.

$$15 - 3 = 12$$



Complete these subtractions.

$15 - 3 = \dots\dots\dots$

$17 - 3 = \dots\dots\dots$

$13 - 4 = \dots\dots\dots$

$12 - 2 = \dots\dots\dots$

$16 - 5 = \dots\dots\dots$

$9 - 5 = \dots\dots\dots$

$14 - 4 = \dots\dots\dots$

$18 - 2 = \dots\dots\dots$

$11 - 5 = \dots\dots\dots$

$10 - 3 = \dots\dots\dots$

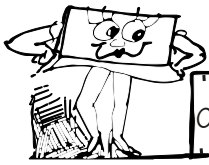
Complete these subtraction strips.

subtract 3 ↓	10	5	13	9	6	14	8	1	12
	7								

subtract 4 ↓	12	7	14	10	16	11	9	13	15
	8								

# Subtraction.

$$13 - 6 = 7$$



Complete these subtractions.

$13 - 6 = \dots\dots\dots$

$15 - 5 = \dots\dots\dots$

$10 - 4 = \dots\dots\dots$

$12 - 6 = \dots\dots\dots$

$14 - 5 = \dots\dots\dots$

$18 - 4 = \dots\dots\dots$

$19 - 6 = \dots\dots\dots$

$16 - 5 = \dots\dots\dots$

$17 - 5 = \dots\dots\dots$

$11 - 6 = \dots\dots\dots$

Subtract the smaller number from the bigger.

The answer is called the difference.

7 5

10 4

6 6

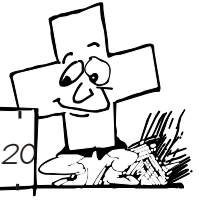
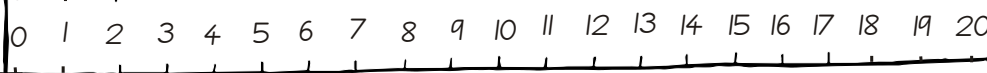
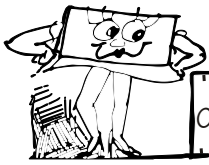
17 3

12 4

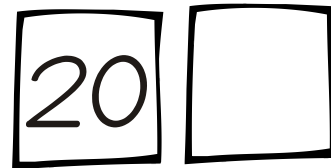
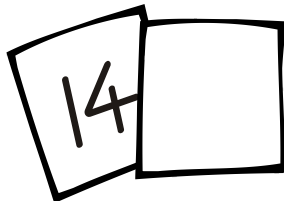
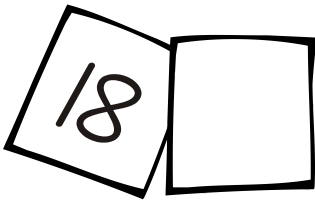
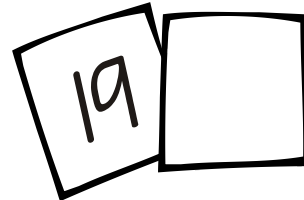
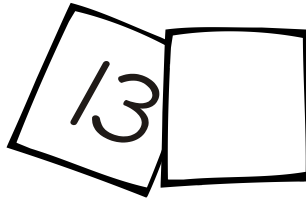
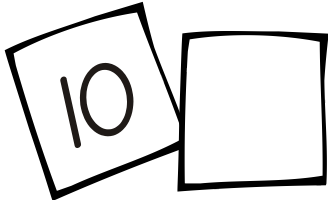
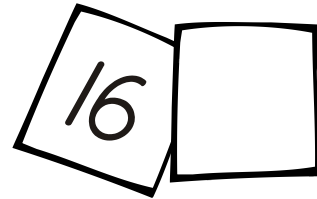
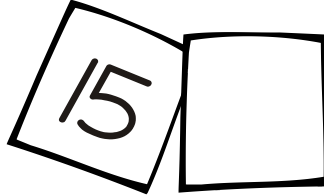
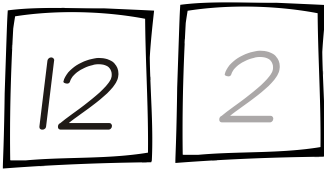
13 5

# Subtraction.

$$12 - 2 = 10$$



The difference between each pair of cards should be 10. Write down the missing numbers.



Complete these subtractions.

$12 - 5 = \dots\dots\dots$

$8 - 8 = \dots\dots\dots$

$19 - 6 = \dots\dots\dots$

$11 - 7 = \dots\dots\dots$

$16 - 7 = \dots\dots\dots$

$18 - 5 = \dots\dots\dots$

$15 - 8 = \dots\dots\dots$

$13 - 6 = \dots\dots\dots$

$20 - 5 = \dots\dots\dots$

$14 - 8 = \dots\dots\dots$

# Subtraction.

Write the difference between the heights of each pair of blocks.

Five pairs of blocks are shown. Each pair consists of a light grey block and a dark grey block. The heights are: 10 and 7, 2 and 4, 3 and 8, 4 and 6, 10 and 4. Illustrations include a helicopter, an airplane, and a cloud.

difference      difference      difference      difference      difference

Complete the subtractions by writing in the missing numbers.

$$10 - \square = 5 \quad 14 - \square = 8$$

$$\square - 2 = 13 \quad \square - 3 = 15$$

$$16 - \square = 12 \quad 11 - \square = 10$$

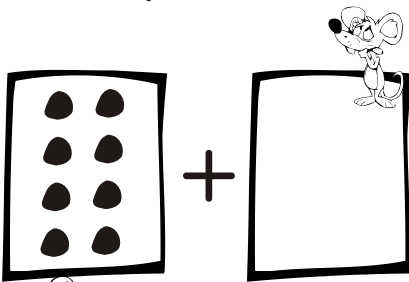
$$\square - 4 = 10 \quad \square - 2 = 18$$

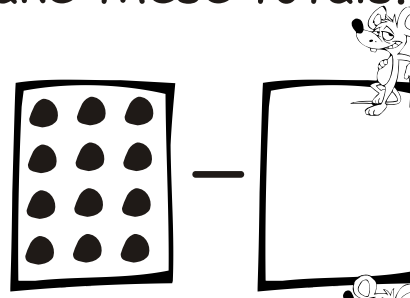


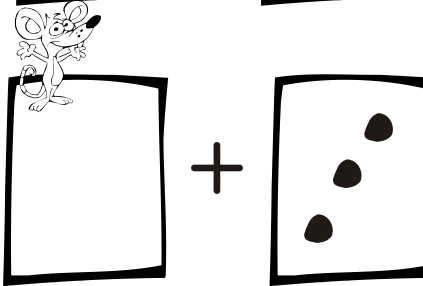


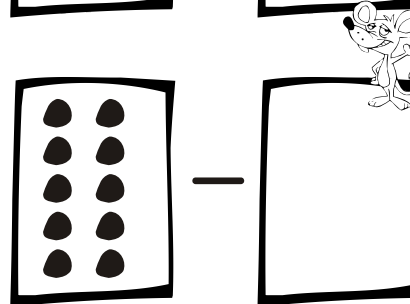
# Subtraction.

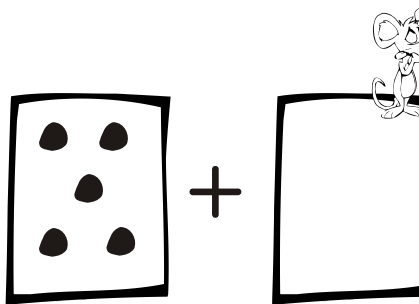
Draw spots on the cards to make these totals.

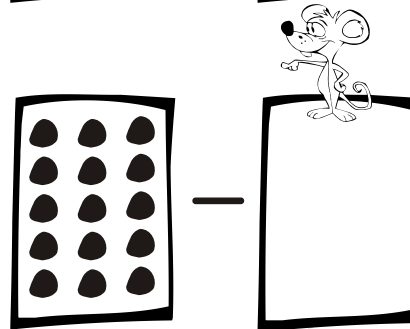

$$6 + \square = 12$$


$$9 - \square = 8$$



$$\square + 3 = 9$$


$$8 - \square = 5$$



$$5 + \square = 13$$



$$10 - \square = 14$$


Complete these sums by writing in the missing sign.



$$5 \square 7 = 12$$



$$5 \square 3 = 2$$



$$12 \square 2 = 10$$


$$2 \square 5 = 7$$


$$10 \square 5 = 5$$


$$8 \square 4 = 4$$


$$7 \square 4 = 11$$


$$4 \square 6 = 10$$







# MIGHTY MATHS

## BEGINNER MATHEMATICIAN for 4 - 6 year olds

### Book 1: Introducing Numbers

Book 1 emphasizes the counting sequence 1 to 20. After completing this book children will be able to recognize and write all of these numbers and use them for counting.

### Book 2: Introducing Arithmetic

Book 2 introduces the basic mathematical operations of addition, subtraction and multiplication. After completing this book, students will recognize the signs (+, - and  $\times$ ) carry out these operations and understand what they mean.

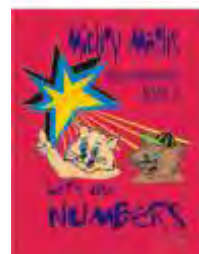
### Book 3: Introducing Addition and Subtraction

Book 3 focuses on the arithmetic operations of addition and subtraction. After completing this book students will be able to use a number line to carry out these operations and will gain increased confidence in dealing with numbers.

### Book 4: Introducing Multiplication and Division

Book 4 focuses on the arithmetic operations of multiplication and division and introduces fractions. After completing this book, students will understand what these concepts mean and how they are used. All pages are designed to encourage a continued and creative interest in Math.

The MIGHTY MATHS series is a structured, easy-to-follow series of fun activities designed to stimulate, challenge and to give your child the best possible start in learning mathematics. Use these books to get a head start or to consolidate work being taught at school.



Beginner Mathematician (for 4 - 6 year olds), look for the **RED** books.

Developing Mathematician for (5 - 7 year olds), look for the **YELLOW** books.

Advancing Mathematician for (6 - 8 year olds), look for the **BLUE** books.

Maturing Mathematician for (7 - 9 year olds), look for the **GREEN** books.

Master Mathematician for (8 - 10 year olds), look for the **ORANGE** books.

Mighty Maths for 9 - 12 year olds, look for the **MULTICOLOURED** books.



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