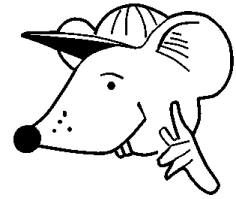


# MATHEMATICS



## Y5 Number

5145

Solve 'real life' problems

## Equipment

Paper, pencil, ruler

# MathSphere

## Concepts

Children need to be able to read and understand problems written in prose that include some elements of real life, although, particularly with younger children, 'real life' has to sometimes be a little artificial in order to keep the problems within their ability levels.

They should be able to read the problem, understand the situation described, be able to see what processes are necessary to solve it and then lay out their answer clearly, giving some explanation.

Explanations should be brief and to the point and it is good practice to encourage children to set out their answers down the page, one line at a time.

The following example shows one way of doing this.

Q.

John has three boxes, each with six cakes. Pat has four boxes, each with eight cakes.

How many cakes do they have altogether?

How many more cakes does Pat have than John?

A.

Number of cakes John has             $= 6 \times 3 = 18$

Number of cakes Pat has             $= 8 \times 4 = 32$

Number of cakes altogether         $= 18 + 32 = \underline{50}$

Pat has  $32 - 18 = \underline{14}$  cakes more than John.

The same method may be used both for simple and more complex problems.

The problems in this module are divided into two types: those involving just one step to arrive at the answer and those involving more than one step.

**\*\*Note to Parents:** If children have previously done little of this type of work before, they often find it very confusing, so try to build confidence, not destroy it. Adults find these problems much easier than children generally do.

### **Single Step Operations**



Here are some problems written in words. They look quite long.

**You need to read them very carefully to see what you need to do.**

Your teacher or parent will show you how to set out your answers.

1. What do I need to subtract from 386 to get 299?
2. I think of a number and double it. The answer is 264. What was my number?
3. Three cricketers achieved these scores in two seasons:  
Fred 473 and 739; Michael 638 and 366; Mary 563 and 271  
What was the total number of runs achieved by each player?
4. A container holds 15 litres of milk. How much milk will twelve containers hold? How many containers will be needed to hold 205 litres of milk?
5. Mr Jones takes his year group on holiday, sleeping in cabins. Each cabin has fourteen beds. How many cabins will be needed for his group of one hundred and fifty five pupils? How many empty beds will there be in these cabins?
6. A school has 463 pupils. One day 89 are away. How many are left in the school?
7. If I divide a number by 17, the answer is 23. What was my number?
8. On average a music CD plays for 56 minutes. How long will 12 CD's play for?
9. One hundred and sixty eight colouring pencils are shared between twelve children. How many do they have each? How many are left over?



Here are some problems written in words. They look quite long.

**You need to read them very carefully to see what you need to do.**

Your teacher or parent will show you how to set out your answers.

### **Single Step Operations**

1. A driver drove two hundred and forty nine kilometres before lunch and one hundred and fifty six kilometres after lunch. How much did he drive altogether? How much further did he drive before lunch than after lunch?
2. I think of a number. If I divide it by 7, the answer is 43. What is the number?
3. Sam runs 372 metres. Fred runs 739 metres. How much further does Fred run than Sam?
4. A garden fence needs 16 panels. How many panels do 25 similar fences need?
5. A roll of film takes twenty four pictures. How many pictures will 34 rolls take?
6. Mrs Stringer has a piece of ribbon 200m long. She cuts off a piece 34.89m long. How much is left?
7. Mrs Ahmed drives 230 miles each day. If her car travels 5.5 miles to the litre, how many litres of petrol will she need each day?
8. What is 552 divided by 23 ?
9. The Maths Rats can eat 17 fruit cakes in one minute. How many cakes can they eat in 24 minutes? (Maths Rats love fruit cakes!!!)
10. I run 1 200 metres in 240 seconds. How many metres is that in each second ?



Here are some problems written in words. They look quite long.

**You need to read them very carefully to see what you need to do.**

### **Single Step Operations**

1. John has 349 stamps, Kelly has 523, Mohammed has 360. How many do they have altogether? Who has the most stamps?
2. I have a book with 288 pages. It has twelve chapters and each chapter is the same length. How many pages are there in each chapter?
3. How many grams would fifteen one-kilogram blocks weigh?
4. Write down all the factors of forty eight.
5. 245 children go ten-pin bowling. If there are six spaces on each lane, how many lanes will they need altogether?
6. Twelve children and nine adults go for a 75 kilometre cycle ride. How many kilometres do they cycle altogether?
7. What number is 637 greater than 794?
8. How many boxes would you need to pack 430 pencils, if each box holds 72 pencils?
9. It is 354 kilometres from Northchester to Midchester and 328 kilometres from Midchester to Southchester. How far is it from Northchester to Southchester via Midchester?
10. What are all the factors of one hundred?



Here are some longer problems written in words. You need to work out more than one thing to get the answers.

**Read them very carefully to see what you need to do.**

### **Multi Step Operations**

1. Michael is spending his holiday walking on the South Downs. He has walked 53 miles and his total journey will be 134 miles. How much further does he need to walk before he is half way?
2. I think of a number. I subtract 16 and divide the answer by 3. I get 23. What number am I thinking of?
3. John has 15 more marbles than Jacky. They have 47 altogether. How many do they have each?
4. Eight boxes of biscuits have twenty seven biscuits each and another two have forty biscuits each. How many biscuits are there altogether?
5. James and Ali have £3.55 pocket money each. Mick and Karen have £3.80 each. How much is this altogether?
6. There are 142 books on the top shelf of a book cupboard. The four shelves below each have 188 books. How many books are there altogether?
7. Sixteen rolls of film can take twenty four photographs each. Twelve more rolls of film can take thirty six photographs each. How many photographs can the twenty eight rolls of film take in total?
8. In a class the fifteen boys each have nine CD's and the seventeen girls each have eight CD's. How many more CD's do the girls have in total than the boys?



Here are some longer problems written in words. You need to work out more than one thing to get the answers.

**Read them very carefully to see what you need to do.**

### **Multi Step Operations**

1. Petri takes a wordsearch book on holiday. The book has 24 puzzles. She does a half of them on Tuesday and a third of them on Wednesday. How many does she have left to do?
2. Ken has 348 stamps. Kerri has 256 stamps. If Ken gives Kerri 22 of his stamps, how many more will Ken have than Kerri?
3. Write down a square number between 650 and 700.
4. Scotty has five more communicators than Kirk. In total they have 27 communicators. How many does each man have?
5. Addy and Divvy have 23 books each. Subby and Multi have 32 books each. How many do they have altogether?
6. Mrs Cobble has 37 potatoes and Mrs Stone has 67 potatoes. If Mrs Cobble buys another fifteen potatoes, how many more potatoes does Mrs Stone have than Mrs Cobble?
7. Seven times a number subtract nine is ninety one. What was the number?
8. For every twelve pupils going on a trip, one adult is allowed to go free. What is the greatest number of people that can go on this trip altogether if forty nine children go?

**Answers**

**Page 3**

1. 87    2. 132    3. Fred 1 212; Michael 1 004; Mary 834  
4. 180 litres 14    5. 12 13 empty    6. 374    7. 391  
8. 672 mins = 11 hrs 12 mins  
9. 14

**Page 4**

1. 405 km 93 km    2. 301    3. 367 m    4. 400    5. 816    6. 165.11m  
7. 41.8 litres    8. 24    9. 408    10. 5 m/s

**Page 5**

1. 1 232 Kelly    2. 24    3. 15 000 g  
4. 1, 2, 3, 4, 6, 8, 12, 16, 24, 48    5. 41    6. 1 575 Km  
7. 1 431    8. 6    9. 682 Km  
10. 1, 2, 4, 5, 10, 20, 25, 50, 100

**Page 6**

1. 14 miles    2. 85    3. John 31; Jacky 16    4. 296    5. £14.70  
6. 894    7. 816    8. 1

**Page 7**

1. 4    2. 48    3. 676    4. Scotty 16; Kirk 11    5. 110    6. 15  
7. 14    8. 53