

## Maths Reasoning Questions – Worded Problems

- Before you start, watch [this BBC guide](#) on how to solve maths problems.

### Worked example:

It is estimated that the population of a town will **increase by 10,000 every year.**

In **2015** the population of the town **was 236,000**

What will the population of the town be **in 2021?**

- I have read the question carefully and highlighted the important information. The population will increase so I know I will be adding 10,000 to the population each year.
- I don't need the column method. I will be adding one to the ten thousands column each time. 236,000
  - 2016 = 246,000
  - 2017 = 256,000
  - 2018 = 266,000
  - 2019 = 276,000
  - 2020 = 286,000
  - 2021 = 296,000
- Our answer is 296,000

## Warming up\*

1.

Holly and Jason play a game.

Holly scores 80 points.

Jason scores 38 points.

How many **more** points does Holly score than Jason?

2

Jason gets **£5** pocket money each week.

Holly gets **£3** pocket money each week.

They both save all their money for **ten weeks**.

How much **more** money has Jason saved than Holly?

3.

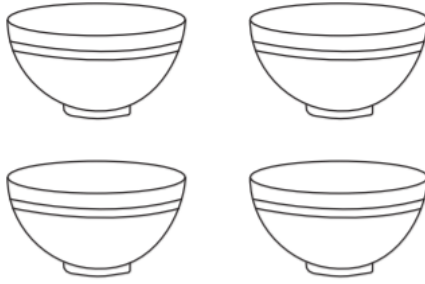
In the high jump, Holly jumped 1 m 12 cm.

Jason jumped 95 cm.

How much higher was Holly's jump?

4.

Holly has four bowls.



She puts **8** grapes in each bowl.

There are **5** grapes left over.

How many grapes did she start with?

**grapes**

## Feeling more confident\*\*

1.

Jason is given £4 each month from his gran.

How much money does he collect in a year?

£

2.

A box has 70 chocolates in it.

20 children each take 3 chocolates.

How many chocolates are left in the box?

chocolates

3.

It costs Mia £27.49 to buy **two** games.

One game costs £14.99

How much does the other game cost?

£

### Ready for a challenge\*\*\*

1.

Miss Smith had 150 reward stickers at the start of the year.

She gave 8 children 7 stickers each.

She gave 12 children 6 stickers each.

How many stickers **are left**?

2.

A shelf holds 15 books.

Jason has 56 books.

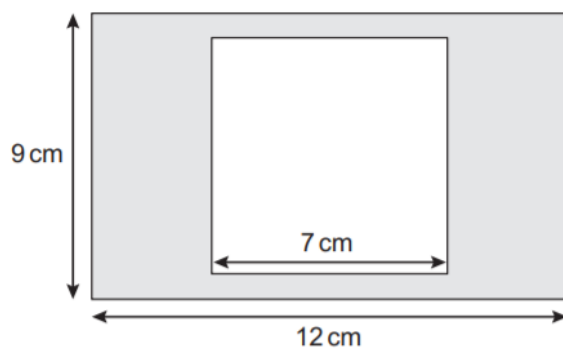
How many shelves does he need to hold **all** his books?

Holly has 7 shelves **full** of books.

How many books does she have altogether?

3.

A square with 7cm sides is cut out of a grey rectangle.



What is the area of the grey shape that is left?

4.



Holly, Jason and Mia take part in a sponsored run to collect money for charity.

Holly collects £2 **more** than Mia.

Jason collects £23

Mia collects £6 **less** than Jason.

Altogether how much money do the three children collect?

### **Warming up\* answers**

1.

42

2.

£20

3.

17cm

4.

37

### **Feeling more confident\*\* answers**

1.

8,000

2.

10

3.

£12.50

## Ready for a challenge\*\*\* answers

1.

Award **TWO** marks for the correct answer of 22

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $8 \times 7 + 12 \times 6 =$   
 $56 + 72 = 128$   
 $150 - 128 = 21$  (*error*)
- $150 - 56 - 72 =$

2.

4

and

105

3.

Award **TWO** marks for the correct answer of  $59 \text{ cm}^2$

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $12 \times 9 - 7 \times 7 =$
- $7 \times 7 = 49$   
 $12 \times 9 = 108$   
 $108 - 49 =$

4.

Award **TWO** marks for the correct answer of £59

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- Jason has £23  
Mia has  $£23 - £6 = £17$   
Holly has  $£17 + £2 = £19$   
 $£23 + £17 + £19 =$