

# Year 6



# Mathematics

## Reasoning - number

Mixed word problems 1

First name	
------------	--

Middle name	
-------------	--

Last name	
-----------	--

Date of birth	Day		Month		Year	
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School name	
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1

A baker needs to make 685 desserts for an event.

He has made trays of brownies and cookies.

This table shows the number of trays he has made of each dessert and how many are in each tray.

Type of dessert	Number of trays	Number of dessert in each tray
Brownies	12	18
Cookies	14	14

How many more desserts does he need to make?

Show  
your  
method



2 marks

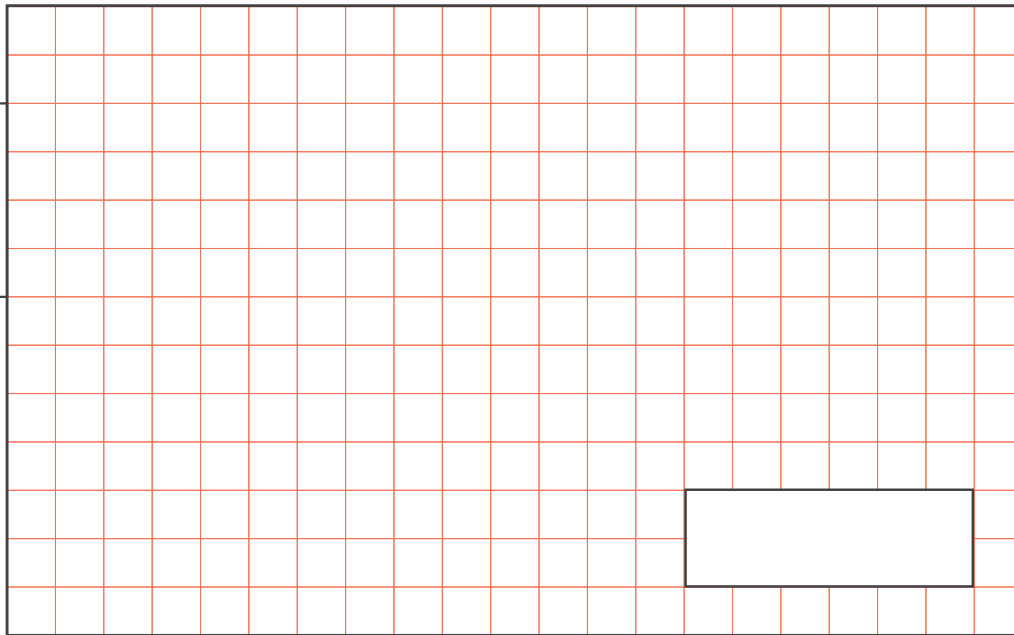


2

Bea is writing the first chapter of her book  
She has written 3,928 words.  
She writes another 598 words.  
She wants to write 5,000 words in total  
for the first chapter.

How many more words does she need to write?

Show  
your  
method

☐

2 marks

3

How many days are there in June, July and August altogether?

☐

1 mark



4

A class's reading corner has 230 books.

7 children take 8 books each.

How many books are left in the reading corner?

Show  
your  
method

5

Aiden, Sam and Hassan are building towers.

Aiden's tower is 54cm tall.

Sam's tower is 8cm shorter than Aiden's.

Hassan's tower is 12cm taller than Sam's.

How tall is Hassan's tower in cm?



1 mark

Whiteboards are sold in packs of 12.

Mrs S has 30 children in her class.

How many packs must she buy?

--

How many whiteboards will she have left over?

\_\_\_\_\_

9

**2 marks**

Whiteboard pens are sold in packs of 20.

Mrs S buys 2 packs.

How many whiteboard pens will she have left over?

--

7

In one year, four pet shops made a combined total of £511,908 profit.

Pet shop A made £98,583

Pet shop B made £104,541

Pet shop C made £84,329

How much did Pet Shop D make?

7

**2 marks**

Show  
your  
method



8

A house costs £416,345

On sale, it is reduced by £50,000

What is the **sale** price of the house?

Show  
your  
method

☐

1 mark

9

Sara is building a set of shelves for her books.

One shelf holds **24** books.

She has **90** books.

How many shelves will she need to hold all of her books?

Her sister, Mia, has **7 full shelves** of books.

How many books does Mia have altogether?

☐

2 marks

10

Gail is baking some chocolate chip cookies and chocolate chip cupcakes for a bake sale.

Each cookie has 27 chocolate chips.

She makes 42 chocolate chip cookies.

Each brownie has 32 chocolate chips.

She makes 28 brownies.

How many chocolate chips does Gail need to buy **altogether**?

2 marks

Show  
your  
method

11

Saskia has tray of 67 plants.

She gives 28 plants to her sister.

How many plants does Saskia have left?

Amirah is planting some flowers in her garden.

She has 6 different flower beds and plants 12 flowers in each bed.

She has 14 flowers left over.

How many flowers did she start with?

2 marks

12

A bakery is running sale offer.

Buy one cake for £12.50, get the second cake for half price.

Amelia buys two cakes.

How much does she pay **altogether**?

Show  
your  
method

☐

2 marks

13

Mr P buys 4 large boxes of toys and 3 small boxes of toys for his classroom.

Each large box contains 80 toys. Each small box contains 40 toys.

How many **toys** did Mr P buy altogether?

Show  
your  
method

☐

2 marks



14

On Saturday morning, there were 1,435 people at a shopping centre.

At midday, 5,212 people had arrived and 3,212 had left.

How many people were there at midday?

Show  
your  
method



1 mark

15

Four children are playing a game.

Otto scores 4 points more than Millie.

Millie scores 12 points less than Arlen.

Caitlin scores 7 points less than Arlen.

Write the children's names in order, starting with the child who scored the most points.

Most points

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



1 mark



16

Idris is making necklaces.

Each necklace has **45** beads.

He has **3** boxes of beads. Each box contains **100** beads each.

How many complete necklaces can Idris make?

Show  
your  
method



2 marks

17

A book has 12 chapters.

Each chapter has between 4,000 and 5,000 words.

What is the **difference** between the **least** amount of words and the **greatest** amount of words the book could contain?

Show  
your  
method



2 marks





20

A baker sells boxes of cupcakes in **boxes of 12** and **boxes of 24**.  
Renee buys **5 boxes of 12 cupcakes**.

How many cupcakes is this?

Stephen bought some boxes of **24 cupcakes**.

Altogether, he has **168 cupcakes**.

How many trays **packs of 24** did he buy?

2 marks

total marks

A baker needs to make 685 desserts for an event.

He has made trays of brownies and cookies.

This table shows the number of trays he has made of each dessert and how many are in each tray.

Type of dessert	Number of trays	Number of dessert in each tray
Brownies	12	18
Cookies	14	14

How many more desserts does he need to make?

[illegible]

**2 marks**

2

Bea is writing the first chapter of her book

She has written 3,928 words.

She writes another 598 words.

She wants to write 5,000 words in total  
for the first chapter.

How many more words does she need to write?

Show  
your  
method

$$\begin{array}{r}
 3928 \\
 + 598 \\
 \hline
 4526
 \end{array}
 \qquad
 \begin{array}{r}
 5000 \\
 - 4526 \\
 \hline
 474
 \end{array}$$

474



2 marks

3

How many days are there in June, July and August altogether?

$$\begin{array}{r}
 \text{June: } 30 \\
 \text{July: } 31 \\
 \text{August: } 31 \\
 \hline
 92
 \end{array}$$

92



1 mark

4

A class's reading corner has 230 books.

7 children take 8 books each.

How many books are left in the reading corner?

Show  
your  
method

$$7 \times 8 = 56$$

$$\begin{array}{r} 230 \\ - 56 \\ \hline 174 \end{array}$$

174

5

Aiden, Sam and Hassan are building towers.

Aiden's tower is 54cm tall.

Sam's tower is 8cm shorter than Aiden's.

Hassan's tower is 12cm taller than Sam's.

How tall is Hassan's tower in cm?

**Aiden's tower: 54cm**

**Sam's tower:  $54 - 8 = 46\text{cm}$**

**Hassan's tower:  $46 + 12 = 58\text{cm}$**

58cm



1 mark



Whiteboards are sold in packs of 12.

How many packs must she buy?

3

How many whiteboards will she have left over?

$$\begin{array}{r} 36 \\ - 30 \\ \hline 6 \end{array}$$

6

7

Whiteboard pens are sold in packs of 20.

Mrs S buys 2 packs.

How many whiteboard pens will she have left over?

$$\begin{array}{r} 40 \\ - 30 \\ \hline 10 \end{array}$$

10

In one year, four pet shops made a combined total of £511,908 profit.

Pet shop A made £98,583

Pet shop B made £104,541

Pet shop C made £84,329

How much did Pet Shop D make?

Handwritten calculations on a grid background:

$$\begin{array}{r} 104541 \\ + 98583 \\ \hline 203124 \end{array}$$

$$\begin{array}{r} 203124 \\ + 84329 \\ \hline 287453 \end{array}$$

$$\begin{array}{r} 51081 \\ - 287453 \\ \hline 224455 \end{array}$$

The subtraction calculation includes borrowing marks above the digits: a '4' above the first 5, a '1' above the first 1, a '0' above the second 1, an '8' above the first 0, and a '1' above the second 0.

7





10

Gail is baking some chocolate chip cookies and chocolate chip cupcakes for a bake sale.

Each cookie has 27 chocolate chips.

She makes 42 chocolate chip cookies.

Each brownie has 32 chocolate chips.

She makes 28 brownies.

How many chocolate chips does Gail need to buy **altogether**?



**2 marks**

[illegible]

11

Saskia has tray of 67 plants.

She gives 28 plants to her sister.

How many plants does Saskia have left?

$$\begin{array}{r} \overset{5}{\cancel{6}}\overset{1}{7} \\ - 28 \\ \hline 39 \end{array}$$

39

Amirah is planting some flowers in her garden.

She has 6 different flower beds and plants 12 flowers in each bed.

She has 14 flowers left over.

How many flowers did she start with?



**2 marks**

$$\begin{array}{r} 12 \\ \times 6 \\ \hline 72 \end{array}$$

86

12

A bakery is running sale offer.

Buy one cake for £12.50, get the second cake for half price.

Amelia buys two cakes.

How much does she pay **altogether**?

Show  
your  
method

$$\begin{array}{r} 6.25 \\ 212.50 \\ \hline \end{array} \quad \begin{array}{r} 12.50 \\ + 6.25 \\ \hline 18.75 \end{array}$$

£18.75

2 marks

13

Mr P buys 4 large boxes of toys and 3 small boxes of toys for his classroom.

Each large box contains 80 toys. Each small box contains 40 toys.

How many **toys** did Mr P buy altogether?

Show  
your  
method

$$\begin{array}{r} 80 \\ \times 4 \\ \hline 320 \end{array} \quad \begin{array}{r} 40 \\ \times 3 \\ \hline 120 \end{array} \quad \begin{array}{r} 320 \\ + 120 \\ \hline 440 \end{array}$$

440

2 marks

On Saturday morning, there were 1,435 people at a shopping centre.

At midday, 5,212 people had arrived and 3,212 had left.

How many people were there at midday?

Show your method

	1	4	3	5		6	6	4	7
+	5	2	1	2	-	3	2	1	2
	6	6	4	7		3	4	3	5

3,435

15

Four children are playing a game.

Otto scores 4 points more than Millie.

Millie scores 12 points less than Arlen.

Caitlin scores 7 points less than Arlen.

Write the children's names in order, starting with the child who scored the most points.

## Millie's points

m

## Arlen

### Most points

## Otto's points

 $m + 4$ 

## Caitlin

## Arlen's points

 $m + 12$ 

## Otto

## Caitlin's points

$$m + 12 - 7 = 5$$

## Millie

1 mark

16

Idris is making necklaces.

Each necklace has **45** beads.

He has **3** boxes of beads. Each box contains **100** beads each.

How many complete necklaces can Idris make?



2 marks

Show  
your  
method

$3 \times 100 = 300$									
$45 \times 6 = 270$									
$270 + 30 = 300$									
$300 \div 45 = 6$									

6

17

A book has 12 chapters.

Each chapter has between 4,000 and 5,000 words.

What is the **difference** between the **least** amount of words and the **greatest** amount of words the book could contain?



2 marks

Show  
your  
method

$4000 \times 12 = 48000$									
$5000 \times 12 = 60000$									
$60000 - 48000 = 12000$									

12,000



18

One hen lays 8 eggs a week.

A farmer has 23 hens.

At the end of the week, he packs their eggs into boxes.

Each box holds six eggs.

How boxes can the farmer **fill**?

$$\begin{array}{r} 23 \\ \times 8 \\ \hline 184 \end{array}$$

$$\begin{array}{r} 30 \text{ r } 4 \\ 6 \overline{) 184} \\ \underline{618} \phantom{4} \\ 4 \end{array}$$

30



2 marks

How many eggs will be **leftover**?

4

19

Emran buys 8 large boxes of books and 2 small boxes of books.

Large boxes of books contain 25 books.

Small boxes of books contain 12 books.

How many **books** did Emran buy altogether?

Show  
your  
method

$$\begin{array}{r} 25 \\ \times 8 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 12 \\ \times 2 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 200 \\ + 24 \\ \hline 224 \end{array}$$

224



2 marks

**20**

A baker sells boxes of cupcakes in **boxes of 12** and **boxes of 24**

Renee buys **5 boxes of 12 cupcakes**.

How many cupcakes is this?

$$12 \times 5 = 60$$

60

Stephen bought some boxes of **24 cupcakes**.

Altogether, he has **168 cupcakes**.

How many trays **packs of 24** did he buy?

$$\begin{array}{r} 007 \\ 24 \overline{)168} \end{array}$$

$$\begin{array}{r} 24 \\ \times 7 \\ \hline 168 \end{array}$$

7



2 marks