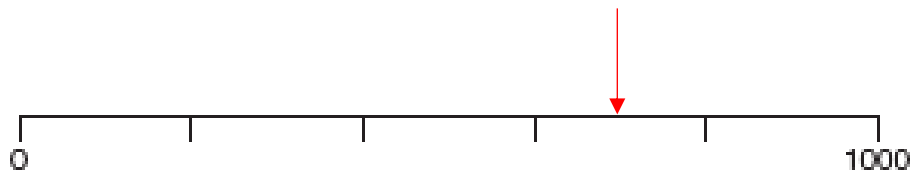


Mathematics

Paper 2: reasoning and problem solving

1

Draw an arrow to show 700 on the number line.



1 mark

2

Complete the grid.

10 less	Starting number	10 more
536	546	556
80	90	100
292	302	312

3 marks

4

Rob buys a guitar for £629, a case for £84 and a strap for £20

How much does he spend altogether?

Show
your
method

$$629 + 84 + 20 =$$

$$629 + 20 = 649$$

$$649 + 84 = 733$$

£ 733

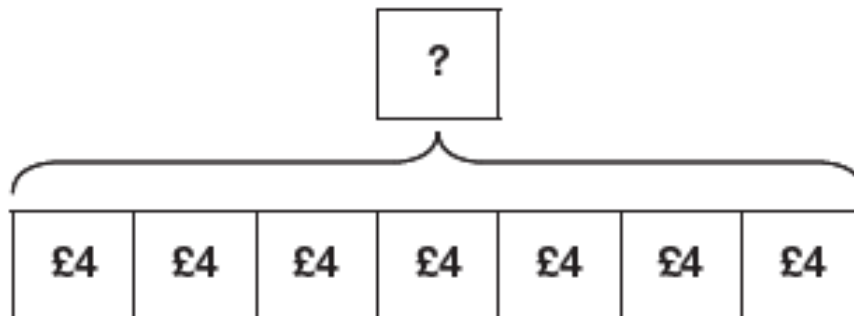
1 mark

5

7 friends pay to go swimming.

It costs £4 per person.

The bar model represents the total amount spent.



How much was spent in total?

$$7 \times 4 = 28$$

£ 28

1 mark

The total for all the girls was £16

How many boys went swimming?

$$£28 - £16 = £12$$

$$£12 \div £4 \text{ each} = \underline{3 \text{ boys}}$$

6

Complete the number sentences.

$$\frac{7}{8} - \boxed{\begin{array}{c} 1 \\ - \\ 8 \end{array}} > \frac{3}{8} + \frac{2}{8}$$

One possible answer is:

$$\boxed{\begin{array}{c} 3 \\ - \\ 11 \end{array}} + \frac{3}{11} = \frac{7}{11} - \boxed{\begin{array}{c} 1 \\ - \\ 11 \end{array}}$$

Other answers could be

$$\frac{2}{11} + \frac{3}{11} = \frac{7}{11} - \frac{2}{11} \quad \text{or} \quad \frac{1}{11} + \frac{3}{11} = \frac{7}{11} - \frac{3}{11}$$

2 marks

7

Fran, Simon and Abe count their football stickers.

Fran has 107 stickers.

Simon has 249 stickers.

Altogether, the three friends have 500 stickers.

How many stickers does Abe have?

Show
your
method

$$107 + 249 = 356$$

$$500 - 356 = 144$$

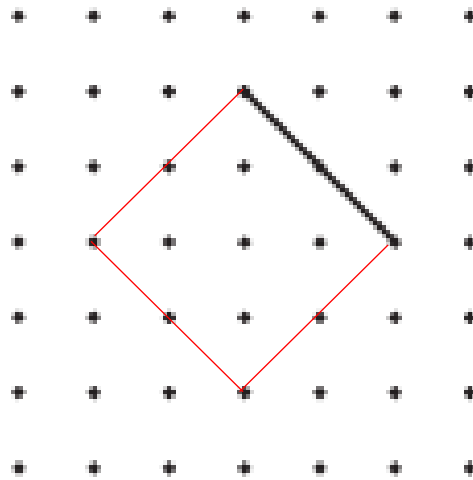
144 stickers

2 marks

9

One side of a square is drawn on the grid below.

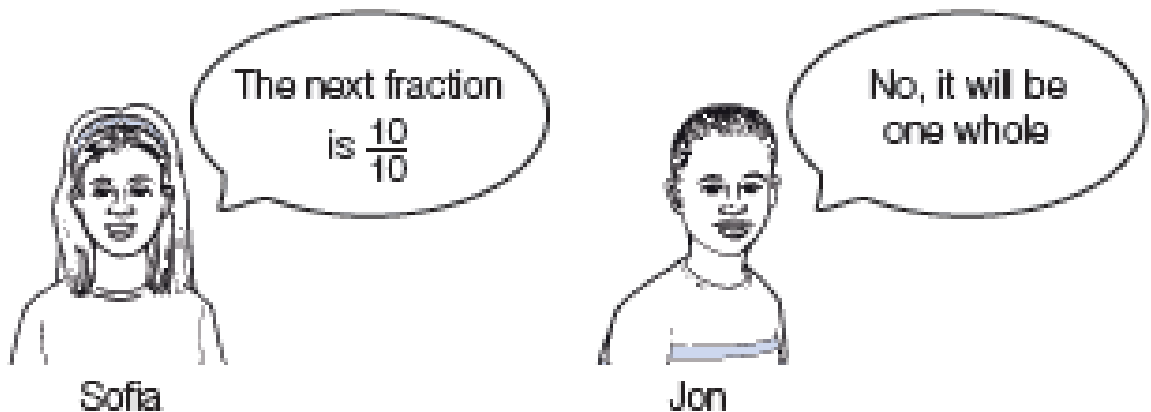
Complete the square.



10

Sofia is counting in tenths.

$$\frac{7}{10}, \frac{8}{10}, \frac{9}{10}$$



Who is correct?

Sofia

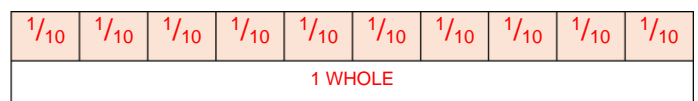
Jon

Both

Explain your answer.

$\frac{10}{10}$ is the same as 1 whole. A whole has been split into 10

10 of those 10 equal parts (denominator) and we're using of those equal parts (numerator) show by this diagram:



11

Complete the number sentence.

$$\boxed{300} + 30 + 2 = 300 + \boxed{40} - 8$$

This is ONE possible answer. As long as both sides of your equation have the same value when you complete the addition and subtraction operations, then your answer will be correct.

1 mark

12

Here is a jug of juice.



Amrit drinks 250ml of the juice.

How much juice is left?

$$650 \text{ ml} - 250 \text{ ml} = 400 \text{ ml}$$

 ml

2 marks

14

At a roller skating club, children are doing as many laps as possible.
It takes Kate 7 seconds to skate each lap.
She does 9 laps.

How long does it take Kate altogether?

Give your answer in minutes and seconds.

$$7 \times 9 = 63 \text{ seconds}$$

There are 60 seconds in 1 minute.

Kate did 9 laps in 1 minute and 3 seconds.

1 minute and 3 seconds or 63 seconds

~~laps~~

2 marks

Jay is 1 second slower than Kate on each lap.

He skates for 48 seconds.

How many laps does he do?

Show
your
method

Jay takes 8 seconds for each lap (7 seconds (Kate's time) + 1 second slower = 8 seconds)

$$48 \text{ seconds} \div 8 \text{ seconds each lap} = 6$$

Jay did 6 laps.

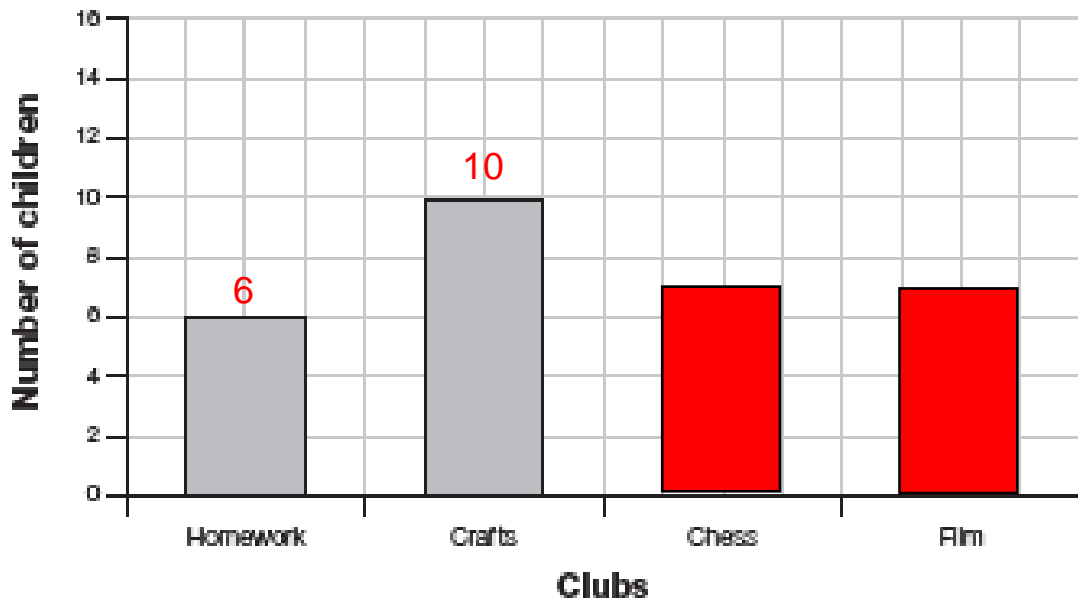
1 mark

15

This bar chart shows Class 3's clubs.

All 30 children, in the class, go to a club.

The same number of children go to Chess club and Film club.



Complete the bar chart.

Find out how many children are already on the bar chart first: $6 + 10 = 16$

Work out the remaining children left: $30 \text{ children in total} - 16 = 14$

The same number of children go to chess and film: $14 \div 2 = 7$

CHALLENGE

16

There are 24 pieces of fruit in a bowl.

$\frac{1}{3}$ are grapes.

$\frac{1}{4}$ are apples.

The rest are strawberries.

How many strawberries are in the bowl?

Show
your
method

$$\frac{1}{3} \text{ of } 24 = 24 \div 3 = 8$$



$$\frac{1}{4} \text{ of } 24 = 24 \div 4 = 6$$



Add the grapes and apples together: $8 + 6 = 14$

Subtract the grapes and apples from the total amount of fruit

$24 - 14 = 10$ strawberries

Friday Maths ANSWERS

1.)

5 45 9

Using each of the three numbers above, complete the number sentences below.

a) $\boxed{9} \times \boxed{5} = \boxed{45}$ $\boxed{45} \div \boxed{5} = \boxed{9}$

b) $\boxed{5} \times \boxed{9} = \boxed{45}$ $\boxed{45} \div \boxed{9} = \boxed{5}$

2

2. Round these numbers to the nearest 100:

134 \longrightarrow $\boxed{100}$

456 \longrightarrow $\boxed{500}$

781 \longrightarrow $\boxed{800}$

546 \longrightarrow $\boxed{500}$

2

3. Write the number that should go in the empty box to make the calculation true.

$1253 = 1000 + 200 + \boxed{50} + 3$

1

4. Continue the number sequence.

15	10	5	0	-5	
----	----	---	---	----	--

1

5. Order these numbers from smallest to biggest:

750, 2340, 89, 1245, 579

smallest

biggest

89	579	750	1245	2340
----	-----	-----	------	------

1

6. Complete the multiplication facts.

$3 \times 6 = 18$ $4 \times 8 = 32$

$3 \times 9 = 27$ $4 \times 6 = 24$

$5 \times 3 = 15$ $3 \times 4 = 12$

2

2

2

7.

a) $25 \times 10 = 250$

b) $100 \times 14 = 1400$

1

8.

a) Double 75 = 150

b) Halve 92 = 46

2

9.

$98 + 67 = 165$

1

10.

$75 - 48 = 27$

1

11. A jar of sweets holds **67 sweets**. Jill put in **another 56 sweets**. How many sweets does she have now?



123

sweets

$$67 + 56 = 123 \text{ sweets}$$

1

12. Dad bought an **ice cream for 65p**. How much **change** will he get from **£2**?



£1.35

change

$$£2.00 - £0.65 = £1.35$$

Or

$$200\text{p} - 65\text{p} = 135\text{p}$$

1

13.

$$18 \times 8 =$$

144

x	10	8
8	(10x8=)	(8 x 8=)
	80	64

$$80 + 64 = 144$$

1

14.

$$38 \div 4 =$$

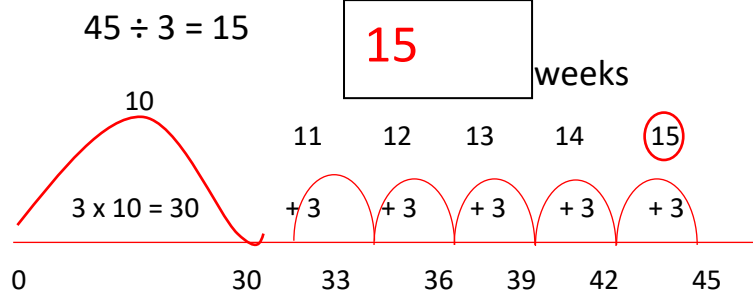
9 and a half

The question should have been:

$$36 \div 4 = 9$$

1

15. If Jill buys **3 stickers a week**, how many weeks will it take to collect **45 stickers**?



1

16. Jill gets **20p pocket money a week**. How much pocket money will she get in **9 weeks**?



$20p \times 9 = 180p$ or £1.80

£1.80

1

17. Doughnuts are sold in **boxes of 6**.
If Jill buys **24 doughnuts**, how many **boxes** did she buy?



$24 \div 6 = 4$

4

Boxes of doughnuts

1

1

18. I think of a number, **double it** and **add 7**. The **answer is 23**. What was my number?



Work it out backwards using the inverse operation:

$23 - 7 = 16$

$16 \div 2 = 8$ My number was 8.

Check it works: $8 + 8 = 16$ (double it) $16 + 7 = 23$

2

19. There are **18 books** on the top shelf and **32 books** on the bottom shelf. **24 books** are **taken away**. How many books are **left** on the shelves?



26

books

Work out total number of books first:

$$18 + 32 = 50$$

Take away the 24 books from the total number of books

$$50 - 24 = 26 \text{ books}$$