10-for-10

Holiday Challenge: Mathematics
'10 Challenges for 10 Days'

ANSWER BOOKLET

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Maths

Easter
Revision

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Day 1
Arithmetic Questions

3 | 8 - 20 =

-12

1 mark

1 | 102 + 4,000 =

4,102

1 mark

2 | 5.6 x 10 =

56

1 mark

4 | 456 x 8 =

3,648

1 mark

5 | 360 ÷ 6 =

60

1 mark

6

Complete the missing numbers in the sequence.

8,   4,   0,   **-4** ,   **-8** ,   -12

7

Circle the number which is closest in value to 5.

5.3   (5.03)   5.1   5.13   5.33

8

Write in the missing numbers to complete the grid.

x	**4**	**3**
8	32	24
7	28	21

9

Calculate the missing angle 'A'.

135º

10

The price of a highlighter pen is 75p when bought individually. A pack of 5 highlighter pens is £3.50. How much cheaper is **one pen** when bought as part of a pack? Show your working.

5p or £0.05

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Day 2
Arithmetic Questions

3 24 x 25 =

600

1 mark

1 _____ = 305,324 + 3,000

308,324

1 mark

4 0.67 x _____ = 67

100

1 mark

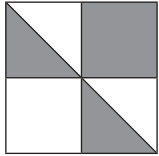**2** 5,060 - 239 =

4,821

1 mark

5 3,672 ÷ 8 =

459

1 mark

6

The diagram below is made of squares and triangles.
What fraction of the diagram is shaded?

$\frac{1}{2}$ or 0.5

1 mark

7

Kim says, '20,001 cannot be a multiple of 4'. Explain why she is correct.

Possible responses:

Because 20,000 is a multiple of 4 so the next multiple of 4 would be 20,004.

All multiples of 4 are even.

9

Circle all the fractions which are equivalent to $\frac{3}{4}$.

$\frac{6}{8}$ $\frac{5}{6}$ $\frac{12}{16}$ $\frac{18}{24}$ $\frac{7}{11}$

1 mark

1 mark

8

Jack ran the 100m in 15.4 seconds. Sima ran it two seconds faster.
What time did Sima record for her run?

13.4 seconds

10

Write these numbers in **ascending order**.

| 0.4 | 0.48 | 0.39 | 0.048 | 0.41 |

| **0.048** | **0.39** | **0.4** | **0.41** | **0.48** |

1 mark

1 mark

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Day 3
Arithmetic Questions

3 _____ = 456 ÷ 100

4.56

1 mark

1 $\frac{2}{8} + \frac{3}{16} =$

$\frac{7}{16}$

1 mark

4 34.5 + 124.8 =

159.3

1 mark

2 6 - 3.25 =

2.75

1 mark

5 5^2 + 355 =

380

1 mark

6

The value of the number in each circle is the same.
What is the value of a circle?

$$\bigcirc + \bigcirc + \bigcirc = 270$$

90

1 mark

7

Complete the table below.

	Rounded to the nearest 10	Rounded to the nearest 100
85.6	**90**	**100**
123.45	**120**	**100**
399.98	**400**	**400**

1 mark

8

Write a number in the box to make the statement true.

(**49** ÷ 7) - 8 = -1

1 mark

9

Mitul says that 0.4 is the same as $\frac{2}{5}$. Is he correct?

Yes / **No**   Explain how you know.

$$\frac{2}{5} = \frac{4}{10} = 0.4$$

1 mark

10

For their Y6 picnic, Class 6H have worked out that they need 24 loaves of bread to make sandwiches. If each loaf is 95p, what is the cost of the bread altogether? Show your working.

£22.80

1 mark

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Day 4
Arithmetic Questions

1 568.4 - 25.3 =

543.1

1 mark

2 $\frac{4}{5} - \frac{3}{4} =$

$\frac{1}{20}$

1 mark

3 0.09 x 1,000 =

90

1 mark

4 $75 - 10 = 5^2 +$ _____

40

1 mark

5 -12 + 20 =

8

1 mark

6

Write the following numbers in the correct place on this Venn diagram.

240   44   35   42   400

Multiples of 3   Multiples of 4

42
35   240
44
400
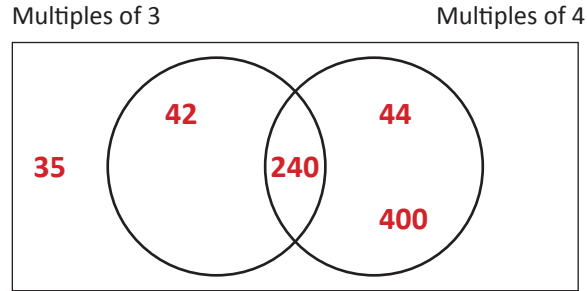
1 mark

7
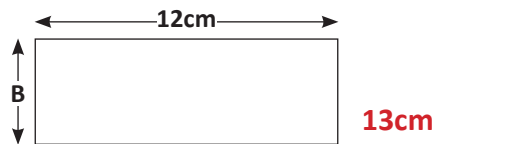
Mr. Smith bought a bag of 5 apples which weighed 585g in total. The bag weighed 5g. What is the weight of one apple? **Give your answer in kg.**

0.116kg
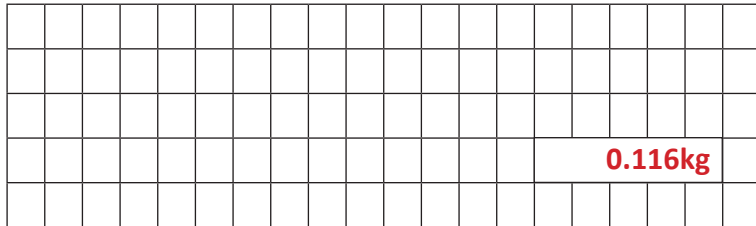
1 mark

8

The rectangle below has a perimeter of 50cm.
Find the missing distance labelled 'B'.

12cm

B

13cm

1 mark

9

Label (or colour) the diagram below so that the ratio of red (R) to green (G) is 5:2. Two have been completed for you.

| R | G | | | | | |

1 mark

10

I think of a number. I halve it and add 2. I then multiply it by 3. My answer is 48. What is my number?

28

1 mark

3 20% x 300 =

60

1 mark

1 84,540 ÷ 15 =

5,636

1 mark

4 2,340 ÷ 1 =

2,340

1 mark

2 $\frac{3}{5}$ x 4 =

$\frac{12}{5}$ = **2** $\frac{2}{5}$

1 mark

5 _____ = 3,500 + 600

4,100

1 mark

6

Calculate the area of this right-angled triangle.

7cm

5cm

17.5cm²

7

Here are some digits.

2   4   5   6   7   9

Use all the digits once to create a square number, a prime number and a multiple of 7.

Square Number   Prime Number   Multiple of 7

2 **5**   **6** **7**   **4** **9**

8

Here is a number sentence.

8 x ☐ < 65

Circle all the numbers which could fit into the number sentence to make it true.

6   15   9   **7**   **5.5**

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Day 5
Reasoning Questions

9

There are 600 pages in a book. Jake has read 40% of them.
How many more pages has he got left to read? Show your working.

360 pages left

10

500 people attend a concert. There are 7 children to every 3 adults. How many children are at the concert? Show your working.

350 children

![PiXL Primary logo]

Day 6
Arithmetic Questions

3 | 0.08 x 100 =

8

1 mark

1 | 254 x 9 =

2,286

1 mark

4 | $\frac{6}{7} \div \frac{2}{3} =$

$\frac{18}{14} = 1\frac{2}{7}$
or equivalent

1 mark

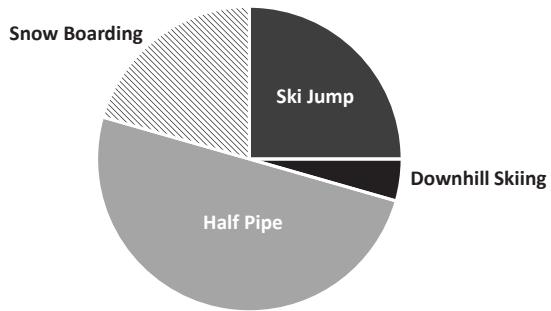**2** | 65 - 49 ÷ 7 =

58

1 mark

5 | 400 x 60 =

24,000

1 mark

6

The pie chart below shows the favourite events at the Winter Olympics. Use the information to estimate the percentage of people who liked snowboarding the most.

Favourite events at the Winter Olympics

Range within 18% - 23%

_____
1 mark

7

Circle the number that is 100 times greater than 5.6

0.56   56   5,600   (560)   5,006

_____
1 mark

8

Estimate the number shown by the arrow.
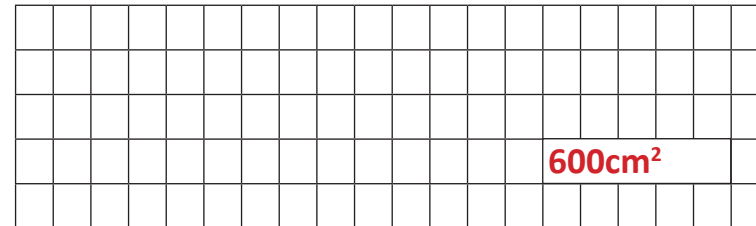
75,000 (accept 73,000 - 77,000)

50,000 _____ 100,000

_____
1 mark
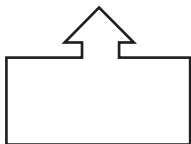
9

A floor is covered in tiles in the shape of identical parallelograms. Calculate the area of **one parallelogram** from the information below. Show your working.

100cm

12cm

600cm²
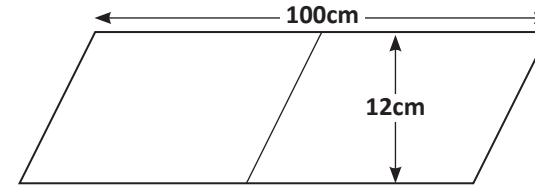
_____
1 mark

10

In the ski jumping event in the Winter Olympics, five athletes jumped the following distances. Calculate the **mean** of their distances.

| 147.2 m | 145m | 0.14km | 137.8m | 145m |

143 _____ m

_____
1 mark

Day 7
Arithmetic Questions

3 123.9 + 0.34 =

124.24

1 mark

1 _____ = 9,865 - 100

9,765

1 mark

4 26 - 36 =

-10

1 mark
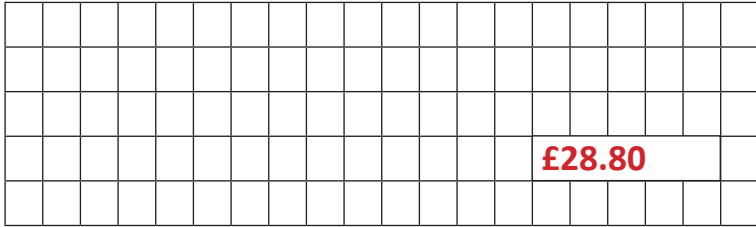
2 3,456 x 1,000 =

3,456,000

1 mark

5 250 + (9 x 5) =

295

1 mark

6

A shop has a 20% discount sale. A pair of trainers are usually £36. How much would they be in the sale? Show your working.
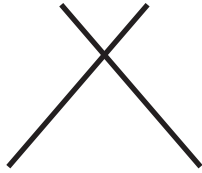
£28.80

1 mark

7

The diagonals of two shapes are drawn below.
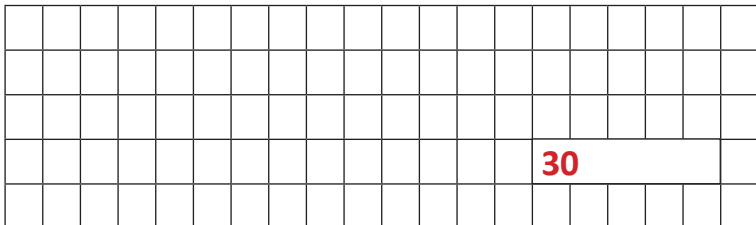Write down the name of each shape in the space next to it.

Kite

Trapezium

1 mark

8

A roll of sandwich bags is 450cm long. Each bag is 15cm long. How many bags are there in a roll? Show your working.

30

1 mark

9

Circle all the numbers that are **multiples of 9**.

118   (18)   89   (540)   (81)

1 mark

10

Draw a line from the shaded box to the correct pair of numbers which make this statement true.

$3t + y = 5$

t = 1, y = 4

t = 1, y = 2

t = 2, y = 3

1 mark

3 | 3,456 + 999 =

4,455

1 mark

1 | _____ = $9^2 + 3^2$

90

1 mark

4 | 15 x 4.2 =

63

1 mark

2 | 50 x 25 =

1,250

1 mark

5 | 4,655 ÷ 19 =

245

1 mark

6

There were 112 roller skaters on a rink. 60 dropped out but a further 26 joined. How many roller skaters are there now? Show your working.

78

1 mark

7

Complete the sequence of numbers.

9   16   25   36   **49**   **64**

1 mark

Leroy says that 146 will be in the sequence. Is he correct?

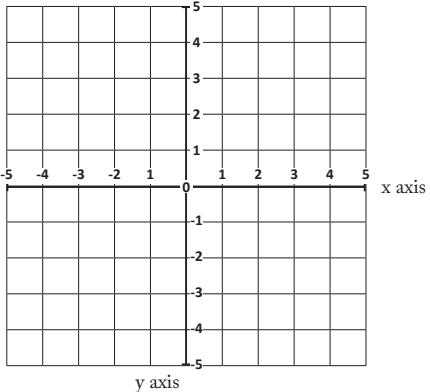**Yes / No**   Explain how you know.

Because all the numbers in the sequence are square numbers. 146 is not a square number.

1 mark

8

Two of the vertices of an isosceles triangle have these coordinates: (1, 3) (3, 3). Plot the points then plot a third vertex to complete the shape. **Write down the coordinates of your third vertex.**

Any points on line: x = 2

Examples: (2,3) (2,4) (2,-4)

1 mark

9

Circle all the numbers that are **common multiples** of 4 and 6.

(240)   30   (120)   16   (48)

1 mark

10

Write one number in each box to make the number sentence true.

$$\frac{4}{12} = \frac{1}{3} = \frac{3}{9}$$

1 mark

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Day 9
Arithmetic Questions

3   2,345 x 7 =

16,415

1 mark

1 $2\frac{1}{6} + \frac{5}{6} =$

$\frac{18}{6} = 3$

1 mark

4   25% of 500 =

125

1 mark

2   25 + (9 x 12) =

133

1 mark

5   4,568 ÷ 4 =

1,142

1 mark

6

Complete the bus timetable below.

Route	Departure Time	Arrival Time	Duration of Journey
Dibden - Sutton	0945	**1040**	55 Minutes
Tulling - Fripton	1115	1340	**2hrs 25 Minutes**
Sibsey - Monkton	**1430**	1545	1hr 15 Minutes

1 mark

7

A shop has 270 pairs of jeans displayed on shelves. Each shelf holds 18 pairs of jeans. How many shelves are needed? Show your working.

15

1 mark

8

Circle all the **common multiples** of 5 and 6.

(30)   55   (120) (90)   66

1 mark

9

$\frac{2}{6}$ of the 360 children in a school come by car. $\frac{2}{6}$ cycle to school.

How many of the children travel to school in other ways?
Show your working.

120

1 mark

10

Insert a pair of brackets to make this statement true.

15 + **(**9 x 8**)** = 87

1 mark

Day 10
Arithmetic Questions

3   2.098 + 12.6 =

14.698

1 mark

1   _____ - 100 = 5,346

5,446

1 mark

4   0.04 x _____ = 40

1,000

1 mark

2 $\frac{2}{7}$ x $\frac{3}{9}$ = _____ Simplify your answer.
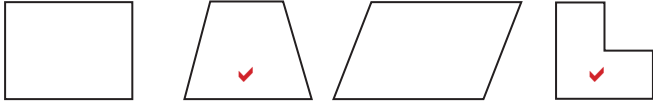
$\frac{2}{21}$

1 mark

5 $3\frac{4}{5}$ x $\frac{2}{3}$ =

$\frac{38}{15} = 2\frac{8}{15}$

1 mark

6

Tick inside the shapes which have **exactly one line of symmetry**.

7

Draw **1 perpendicular line** inside this shape to create a trapezium and a triangle.
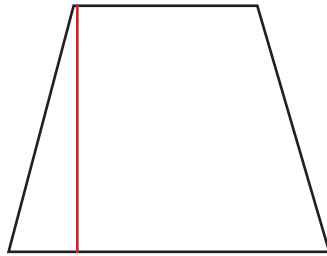
One possibility

8

Insert one of these symbols into each box to make the statements true.   **< > =**

$$\frac{5}{6} \; \boxed{=} \; \frac{10}{12}$$

$$75\% \; \boxed{>} \; 0.6$$

$$5\% \; \boxed{=} \; 0.05$$
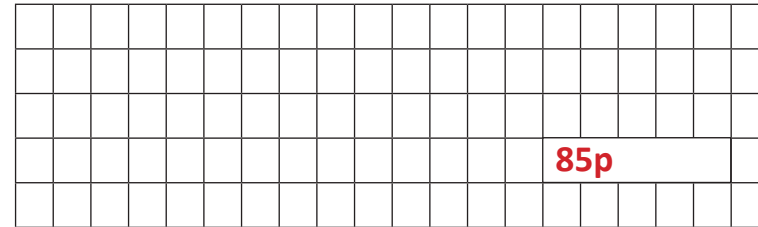
9

Amina posts four large letters. The postage costs the same for each letter. She pays with a £20 note. Her change is £16.60. What is the cost of posting one letter? Show your working.
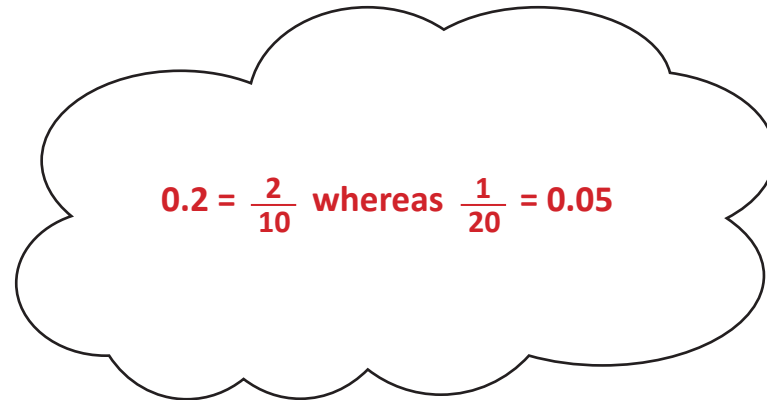
85p

10

James says 0.20 is equivalent to $\frac{1}{20}$.

Is he correct?   **Yes / No**   Explain how you know.

0.2 = $\frac{2}{10}$ whereas $\frac{1}{20}$ = 0.05