

Half Term Holiday Challenge: Mathematics (Set B)

Answers

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DAY 1

Arithmetic Questions

1 $1.9 \times \underline{\hspace{2cm}} = 190$

100

1mark

2 $3,652 \div 8 =$

456^{r4}

1mark

3 $23 + 48 \times 3 =$

167

1mark

4 $\underline{\hspace{2cm}} - 26,497 = 58,361$

84,858

1mark

5 $\frac{3}{5}$ of 1,200 =

720

1mark

DAY 1

1. Here is a number sentence:

$$62 - \boxed{} < 48$$

Circle **all** the numbers below that make the number sentence correct.

12 **48** **30** 5 13 (1 mark)

2. Here are 6 digit cards.

1 2 3 4 6 7

Use all six digit cards once to make, a prime number, a square number and a number that is a multiple of 4.

1	7
---	---

Prime number

3	6
---	---

Square number

2	4
---	---

Multiple of 4

You could also have 47 prime, 36 square and 12 as a multiple of 4. (1 mark)

3. Claire thinks of a number. She multiplies it by 10, adds 17 and then halves it. Her answer is 60. What number was she thinking of at the start?

10.3 (1 mark)

Reasoning Questions

4. Seb says 63 is the lowest common multiple of 7 and 9.

Is Seb correct? Circle **Yes** or **No**

Explain how you know.

7	56	9	72
14	63	18	81
21	70	27	90
28		36	
35		45	
42		54	
49		63	

(1 mark)

5. Write the missing numbers.

29,253 29,364 29,475 29,586 29,697 29,808

(1 mark)

DAY 2

Arithmetic Questions

1 $\frac{1}{4} + \frac{3}{5} =$

17/20

1mark

2 $365 \times 29 =$

10,585

1mark

3 $\frac{8}{9} \div 4 =$

$\frac{2}{9}$

1mark

4 $9 - 3.62 =$

5.38

1mark

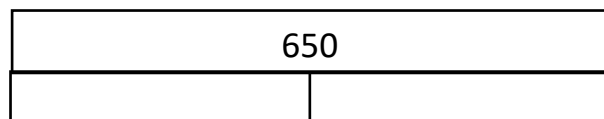
5 $560 \div \underline{\hspace{2cm}} = 8$

70

1mark

DAY 2

1. Look at this bar diagram.



Circle all the pairs of numbers that make the whole.

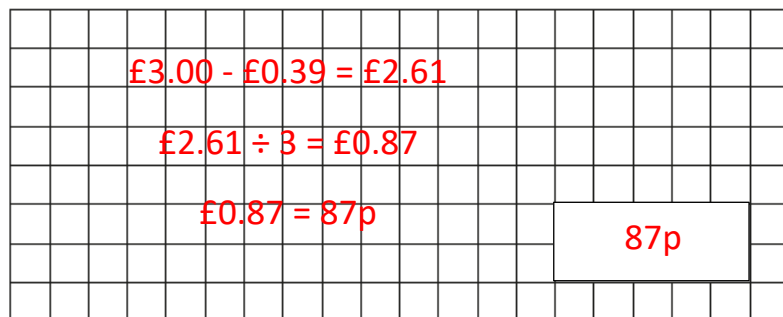
- $150 + 500$ $675 - 25$ $6,050 \div 10$
 $580 + 80$ $6,500 - 100$ 13×50

(1 mark)

2. 3 bags of crisps cost the same as 1 pack of biscuits. Tom paid the shopkeeper £3 for a pack of biscuits and got 39p change.

What is the cost in pence of 1 bag of crisps?

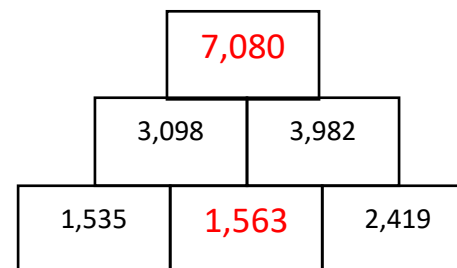
Show your working.



(1 mark)

3. This is an addition pyramid. The total in a box is made by adding the two boxes underneath. Use this rule to find the missing numbers.

Reasoning Questions



(1 mark)

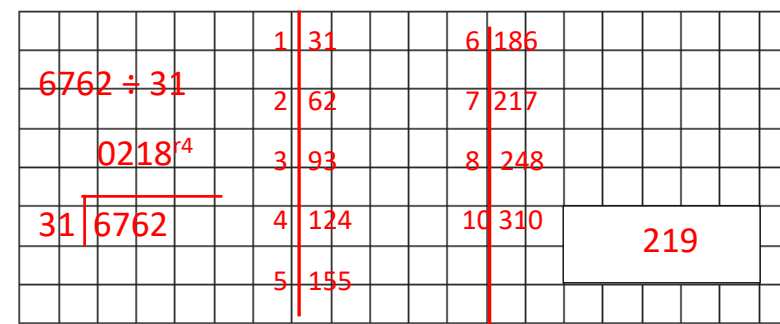
4. Write the missing number

$$\boxed{77} \div 8 = 9 \text{ remainder } 5$$

(1 mark)

5. Tourists to Thorpe Park theme park can get on the largest rollercoaster in groups of 31. If there are 6,762 visitors visiting on one day, how many times does the rollercoaster have to run for all visitors to go on the ride once?

Show your working.



(2 marks)

DAY 3

Arithmetic Questions

1 $92 \times 36 =$

3,312

1 mark

2 $6^2 =$

36

1 mark

3 $1.9 \div \underline{\hspace{2cm}} = 0.0019$

1,000

1 mark

4 $32.6 + \underline{\hspace{2cm}} = 41.97$

9.37

1 mark

5 $20\% \times 360 =$

72

1 mark

DAY 3

Reasoning Questions

1. Circle all the fractions equivalent to $\frac{3}{4}$:

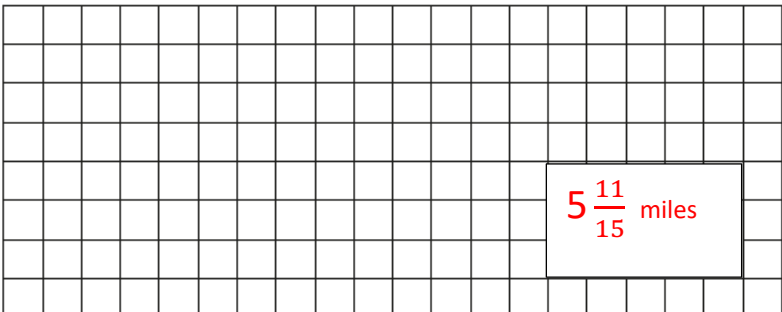
$$\frac{3}{12} \quad \frac{15}{20} \quad \frac{6}{9} \quad \frac{30}{40} \quad \frac{12}{20}$$

(1 mark)

2. Sally is doing a charity cycle. She cycles $3\frac{2}{5}$ miles in the morning and $2\frac{1}{3}$ miles in the afternoon.

How far was her charity cycle?

Show your working.



(1 mark)

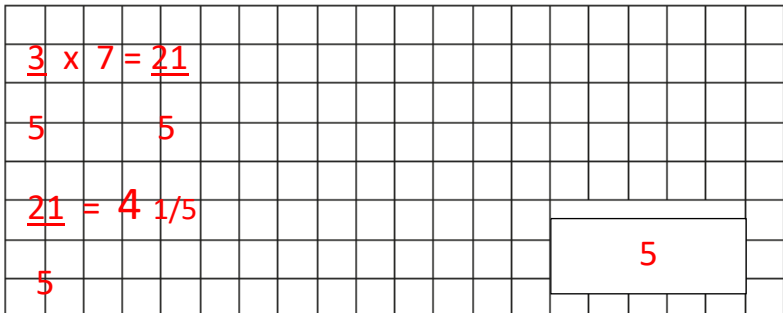
3. Write one number in each box to make these fraction sentences correct.

$$\frac{\boxed{3}}{12} = \frac{1}{4} = \frac{5}{\boxed{20}}$$

$$\frac{2}{\boxed{5}} + \frac{2}{10} = \frac{6}{\boxed{10}}$$

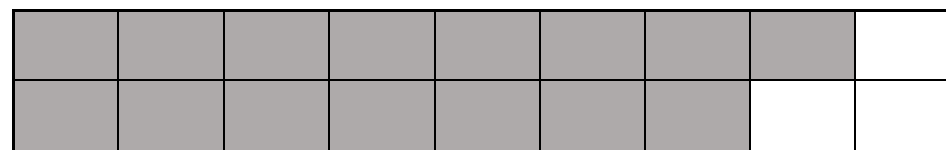
4. My cats eat $\frac{3}{5}$ of a tin of cat food a day. How many tins will I need to buy to last them one week?

Show your working.



(1 mark)

5. Tim uses $\frac{5}{6}$ of this chocolate bar. Shade the number of chocolate squares he has used.



(1 mark)

DAY 4

Arithmetic Questions

1 $16 \times 4 + (19 - 8) =$

75

1mark

2 $\frac{\quad}{\quad} = \frac{3}{4} \times 200$

150

1mark

3 $\frac{\quad}{\quad} - \frac{2}{6} = \frac{1}{3}$

$\frac{2}{3}$ or $\frac{4}{6}$

1mark

4 $5^3 - 3^2 =$

116

1mark

5 $5,692 \div 13 =$

437^{r11}

1mark

1. Find the value of the symbols.



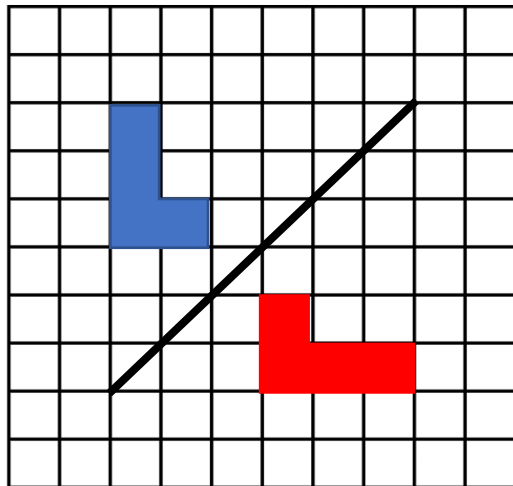
$$\blacksquare + \blacksquare + \blacksquare = 18$$

$$\blacktriangle - \blacksquare = 2$$

$$\blackstar \times \blacksquare = 30$$

$$\blacktriangle = \underline{\quad 8 \quad} \quad \blacksquare = \underline{\quad 6 \quad} \quad \blackstar = \underline{\quad 5 \quad}$$

2. Reflect the shape in the mirror line.



3. $3y + x = 24$

When $x = 3$

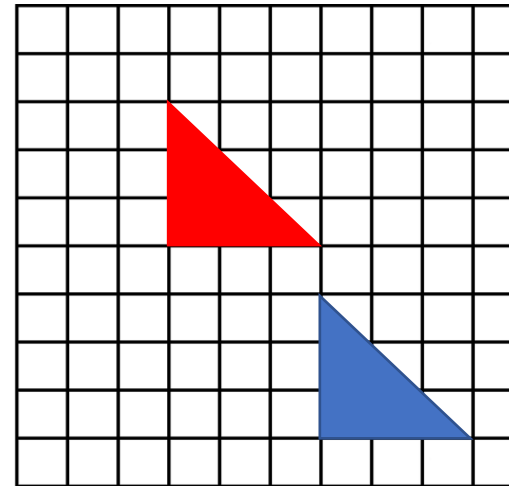
$$y = \boxed{7}$$

When $y = 4$

$$x = \boxed{12}$$

Reasoning Questions

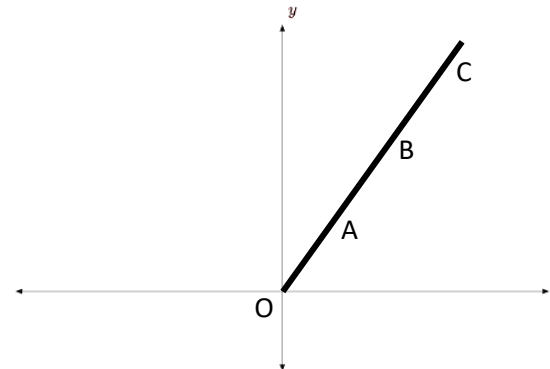
4. Translate the shape 3 squares left and 4 squares up.



(1 mark)

(1 mark)

5. Here is a line on a coordinate grid.



(1 mark)

Points O, A, B and C are equally spaced. The coordinates of A are (12,15). What are the coordinates of point C?

(1 mark)

 (36, 45) (1 mark)

DAY 5

Arithmetic Questions

1 $263,592 + \underline{\hspace{2cm}} = 274,592$

11,000

1mark

2 $\underline{\hspace{2cm}} = 6 \times 3 \times 7$

126

1mark

3 35% of 4,000 =

1,400

1mark

4 $\frac{5}{9} \times 8 =$

$4\frac{4}{9}$

1mark

5 $2.36 \times 5 =$

11.8

1mark

1. Complete this table by rounding the numbers to the nearest whole number.

Number	Rounded to the nearest whole number
29.1	29
38.6	39
42.5	43
30.4	30

(1 mark)

2. Write these numbers in **ascending order**.

7 6.26 6.106 6.7 6.666

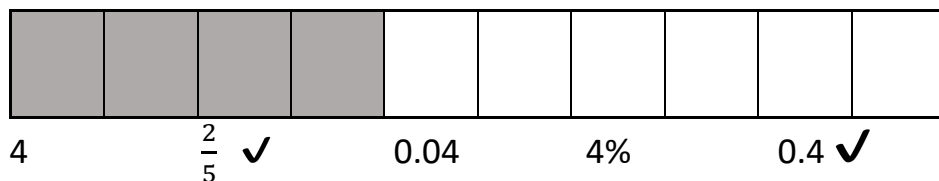
6.106	6.26	6.666	6.7	7
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smallest

largest

(1 mark)

3. Tick (✓) all the numbers which represent the shaded part of the diagram.



(1 mark)

Reasoning Questions

4. Bobby has £69 to spend on new clothes.

jogging bottoms	£7.95
t-shirts	£4.55
packs of socks	£2.99

He buys 3 packs of socks and 2 pairs of jogging bottoms. How much does he have left to spend on t-shirts?



Show your working.

$£2.99 \times 3 = £8.97$	
$£7.95 + £7.95 = £15.90$	
$£15.90 + £8.97 = £24.87$	
$£69.00 - £24.87 = £44.13$	£44.13

(1 mark)

5. Match each fraction to its equivalent decimal or percentage.

$\frac{1}{10}$	30%	$\frac{2}{5}$
$\frac{3}{20}$	0.15	$\frac{15}{50}$
	0.01	
	0.25	
	40%	
	10%	

(1 mark)