Half Term Holiday Challenge: Mathematics (Set B)

This booklet is designed to keep your brains 'ticking over' during the termly break. Just a few short activities will mean that you return ready to learn and raring to go! Try to really impress your teacher by completing one challenge for each day of the week off. Circle any questions that you'd like some more help with when term starts again.

Commissioned by The PiXL Club Ltd.

DAY 1

Arithmetic Questions

1 1.9 x _____ = 190

1mark

2 3,652 ÷ 8 =

1mark

3 23 + 48 x 3 =

1mark

4 _____ - 26,497 = 58,361

1mark

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

1mark

DAY 1

Reasoning Questions

1. Here is a number sentence:

62 - ☐ < 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.

☐☐ ☐☐ ☐☐

Prime number Square number Multiple of 4

(1 mark)

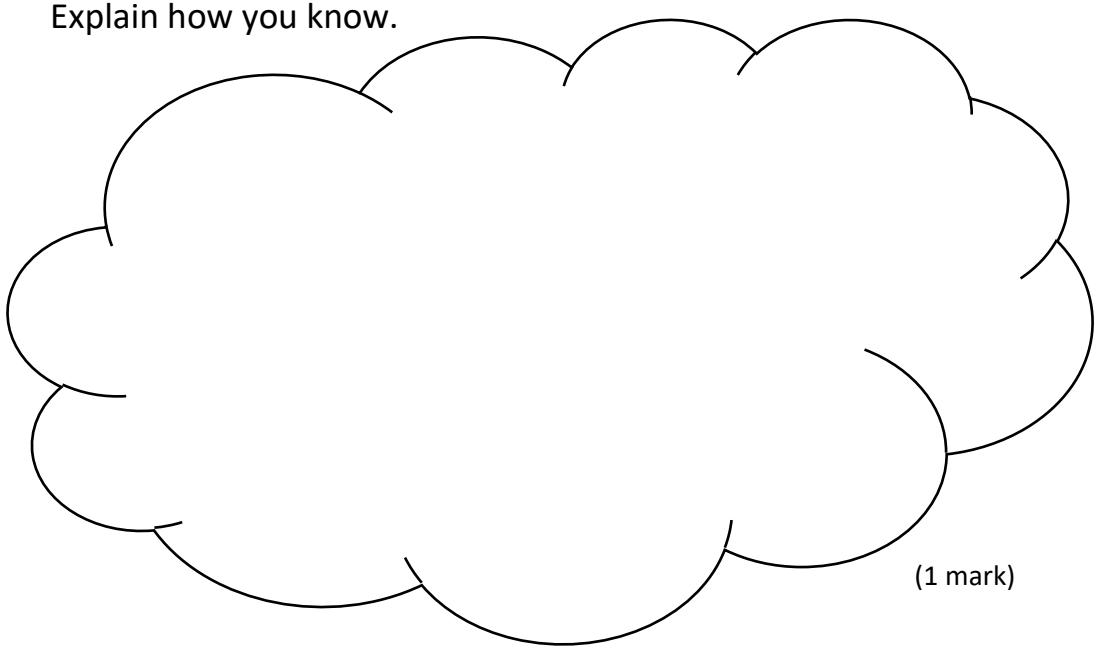
3. Claire thinks of a number. She multiplies it by 10, adds 17 and then halves it. Her answer is 60. What number was she thinking of at the start?

_____(1 mark)

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

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

Explain how you know.



(1 mark)

5. Write the missing numbers.

_____ 29,364 29,475 _____ 29,697 _____

(1 mark)

DAY 2

Arithmetic Questions

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

1 mark

2 365 x 29 =

1 mark

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

1 mark

4 9 – 3.62 =

1 mark

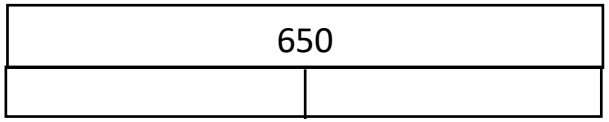
5 560 ÷ _____ = 8

1 mark

DAY 2

Reasoning Questions

1. Look at this bar diagram.



Circle all the pairs of numbers that make the whole.

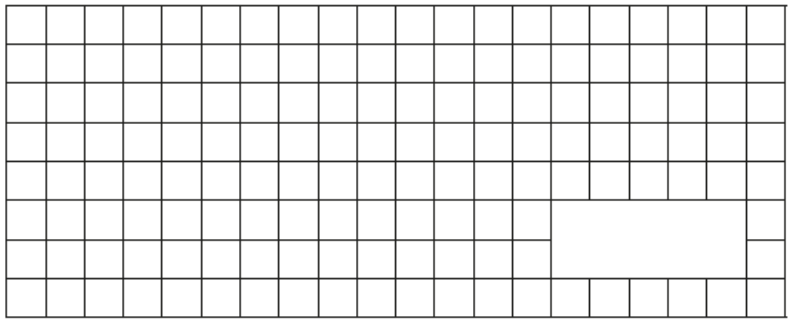
150 + 500	675 – 25	6,050 ÷ 10
580 + 80	6,500 – 100	13 x 50

(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.

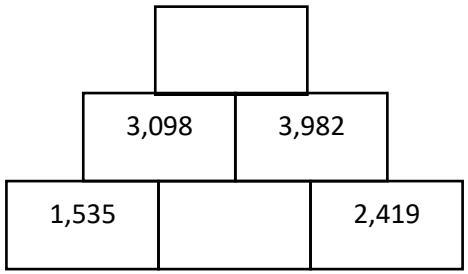
What is the cost in pence of 1 bag of crisps?

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.



(1 mark)

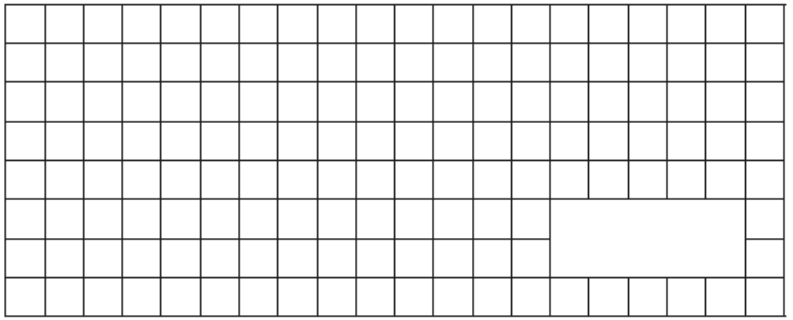
4. Write the missing number

÷ 8 = 9 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 x 36 =

1 mark

2 6^2 =

1 mark

3 1.9 ÷ _____ = 0.0019

1 mark

4 32.6 + _____ = 41.97

1 mark

5 20% x 360 =

1 mark

DAY 3

Reasoning Questions

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

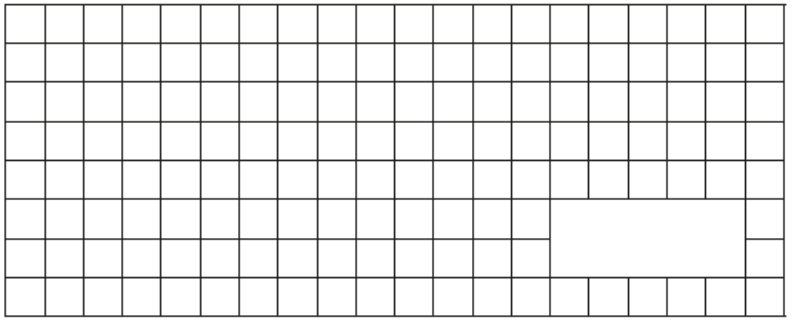
$\frac{3}{12}$ $\frac{15}{20}$ $\frac{6}{9}$ $\frac{30}{40}$ $\frac{12}{20}$

(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.

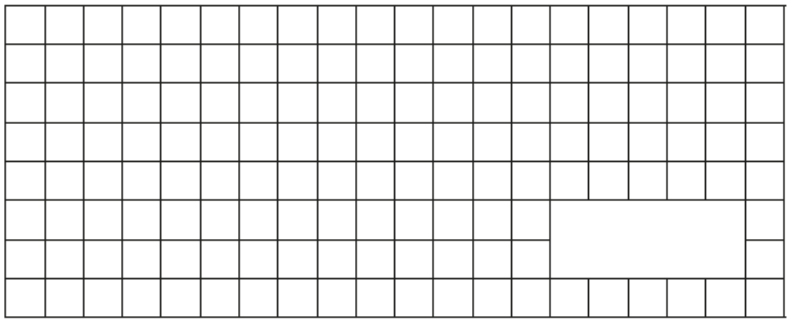
$\frac{\square}{12} = \frac{1}{4} = \frac{5}{\square}$

$\frac{2}{\square} + \frac{2}{10} = \frac{6}{\square}$

(1 mark)

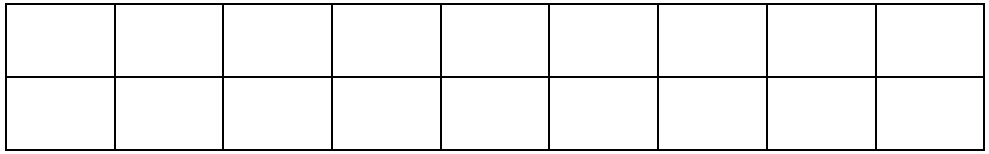
4. My cats eat $\frac{3}{5}$ of a tin of cat food a day. How many tins will I need to buy to last them one week?

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

1mark

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

1mark

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

1mark

4 $5^3 - 3^2 =$

1mark

5 $5{,}692 \div 13 =$

1mark

DAY 4

Reasoning Questions

1. Find the value of the symbols. ▲ ■ ★

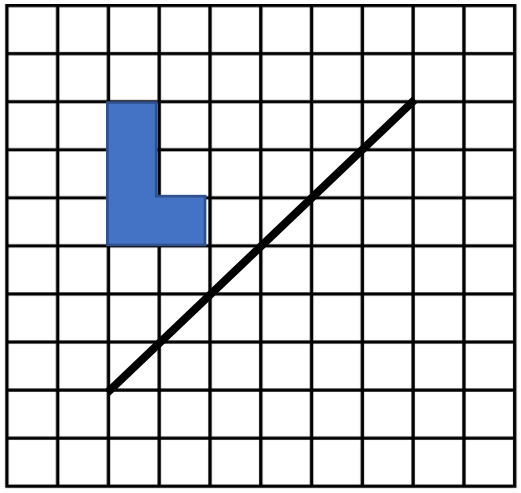
■ + ■ + ■ = 18

▲ - ■ = 2

★ X ■ = 30

▲ = _____ ■ = _____ ★ = _____ (1 mark)

2. Reflect the shape in the mirror line.



(1 mark)

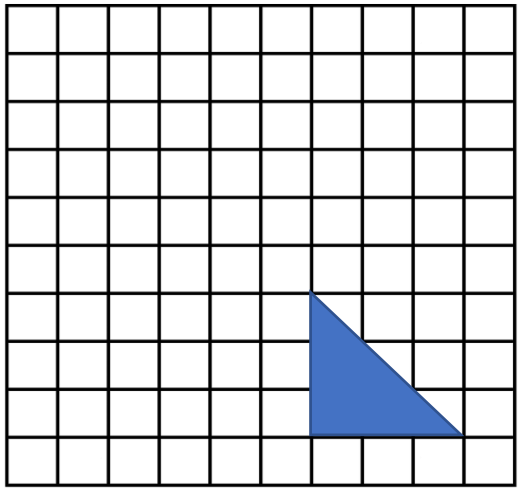
3. 3y + x = 24

When x = 3 y = ☐

When y = 4 x = ☐

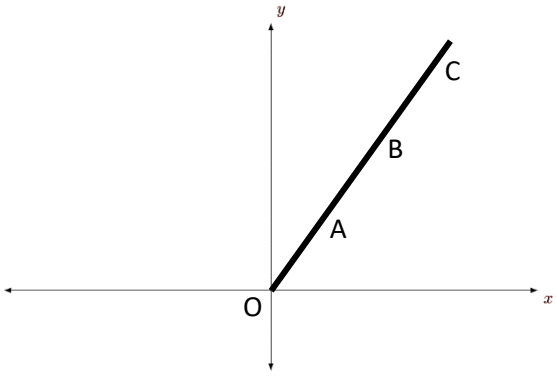
(1 mark)

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



(1 mark)

5. Here is a line on a coordinate grid.



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)

DAY 5

Arithmetic Questions

1 263,592 + _____ = 274,592

1mark

2 _____ = 6 x 3 x 7

1mark

3 35% of 4,000 =

1mark

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

1mark

5 2.36 x 5 =

1mark

DAY 5

Reasoning Questions

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

Number	Rounded to the nearest whole number
29.1	
38.6	
42.5	
30.4	

(1 mark)

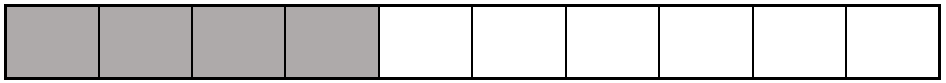
2. Write these numbers in **ascending order**.

7 6.26 6.106 6.7 6.666

smallest largest

(1 mark)

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



4 $\frac{2}{5}$ 0.04 4% 0.4

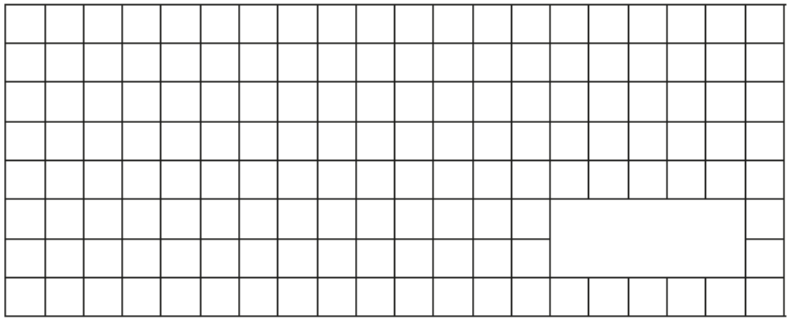
(1 mark)

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.



(1 mark)

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

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

(1 mark)