UNIT 1   The number system

1. Identify the place value for each digit in the number 304.215.

One has been done for you.

Digit	Place value
0	
1	
2	
3	hundreds
4	
5	

0. Complete the place value diagram.

54.385 ⟶ | 50 | + | | + | | + | 0.08 | + | |

0. Kofi regroups five numbers but two of his answers are wrong.

Which answers are wrong?

A 38.565 = 3856 tenths + 5 thousandths

B −48.39 = −40 − 8 − 0.3 − 0.09

C 34.079 = 34 + 0.79

D −56.079 = −50 − 6.079

E 76.091 = 70 + 6 + 0.09 + 0.001

_____ Answer: _____

4. What is 5.28 to the nearest tenth? _____

UNIT 2   Numbers and sequences

1. **Lee shaded squares to make a sequence of cross patterns.**
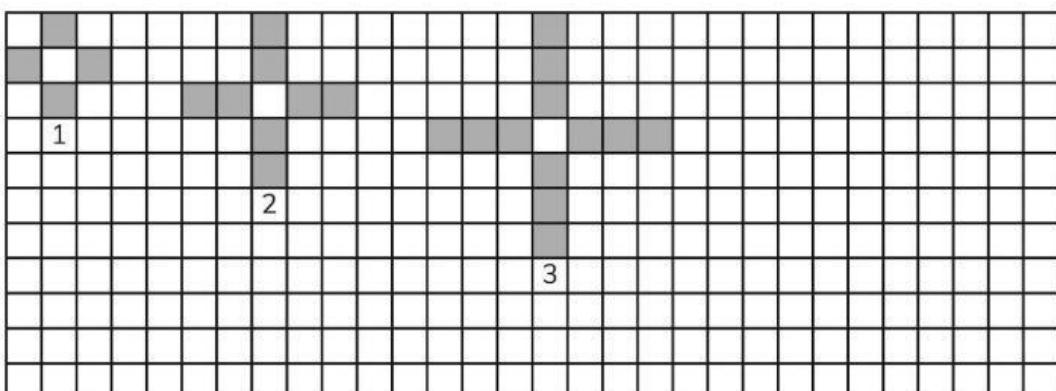
   a.   Draw the next cross pattern.

   a.   Complete the table.

Position	1	2	3	4	5
Term (Number of shaded squares)					

   c.   What is the position-to-term rule for the sequence?

   _____

   d.   How many shaded squares are in the 6th pattern?

   _____

0.   **Draw a ring around the rule to continue this sequence.**

   0,   0.25,   0.5   0.75,   1, ...

   increase by 0.5   increase by 0.25

   decrease by 0.5   decrease by 0.25

   3.a   Write the numbers in the correct place on the Venn diagram.

   14   20   24   30   36
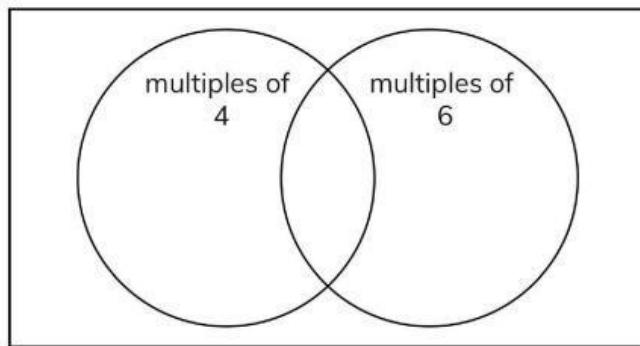
b. Which numbers are common multiples of 4 and 6?

_____

4. **Find all the common factors of these numbers.**

a. 15 and 20.

_____

b. 18 and 27.

_____

UNIT 3: Averages

Calculate the mode, median, mean and range for these sets of data.

1   6,   4,   7,   2,   5,   6

Mode ☐   Median ☐

Mean ☐ $6 + 4 + 7 + 2 + 5 + 6 =$ ☐

☐ $\div 6 =$ ☐

Range ☐ $7 - 2 =$ ☐

2   2,   2,   11,   9,   4,   2

Mode ☐   Median ☐

Mean ☐   ☐ $+$ ☐ $+$ ☐ $+$ ☐ $+$ ☐ $+$ ☐ $=$ ☐

☐ $\div$ ☐ $=$ ☐

Range ☐   ☐ $-$ ☐ $=$ ☐

2.Look at the data and answer the questions.

How many times can they bounce a basketball?

	First try	Second try	Third try
Ali	5	15	18
Lizzy	8	12	20
Carlos	7	21	17
May	13	14	15

a.   How many people does the data include? _____

a.   How many times did each person try? _____

b.   What is the lowest number of bounces? _____

c.   What is the highest number of bounces? _____

d.   What is the average number of bounces for Lizzy?

(Round to the nearest whole number.) _____

e.   What is the **median** value for May? _____

f.   What is the **range** of bounces for all the children? _____

g.   What is the **mode** for this table? _____

h.   What is the **mean** value for all of the children?

(Round to the nearest whole number.) _____

UNIT 4: Addition and subtraction (1)

1 Write the missing digits to make this addition calculation correct.

		3	
+		3	3
3	0	0	0

Use the number line to help you answer questions 2 and 3.

```
←——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——+→
  −10 −9 −8 −7 −6 −5 −4 −3 −2 −1  0  1  2  3  4  5  6  7  8  9  1
```
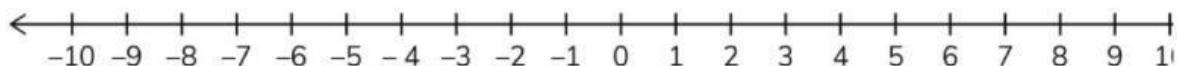
2 Calculate.

a −5 + 4   b −2 − 7   c 8 − 9

_____   _____   _____

3 What is the difference between these pairs of numbers?

a 8 and −2   b −1 and −5   c −3 and −5

_____   _____   _____

4 Mia completes this subtraction. Her answer is incorrect.

|	7	6	0	1
−	6	5	2	1
	1	1	8	0

Correct the error.

5   A and B are two numbers on a number line.
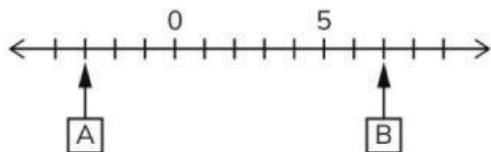
What is the difference between A and B?

_____

6   The perimeter (p) in centimetres of an equilateral triangle is the sum of the lengt of the sides.

a represents the length of a side measured in centimetres.
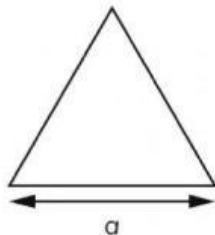
a   Complete the number sentence.

$p = $ _____

b   If the perimeter of the equilateral triangle is 24 cm, what is the value of a?

_____

UNIT 5: 2D SHAPES

1   Draw a line between the shape and its name. One has been done for you.

Isosceles trapezium

Kite
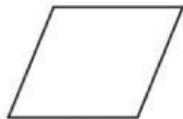
Parallelogram

Rectangle
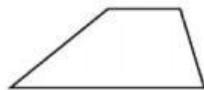
Rhombus

Square

Trapezium

LIVEWORKSHEETS

2   Complete these questions about parallel sides.
    The first one has been done for you.
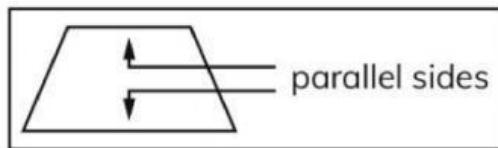
parallel sides

a   An isosceles trapezium has __1__ pair of parallel sides.

b   A kite has _____ pairs of parallel sides.

c   A parallelogram has _____ pairs of parallel sides.

d   A rectangle has _____ pairs of parallel sides.

e   A rhombus has _____ pairs of parallel sides.

f   A square has _____ pairs of parallel sides.

g   A trapezium has _____ pair of parallel sides.

Q.3

Label the parts of the circle shown.
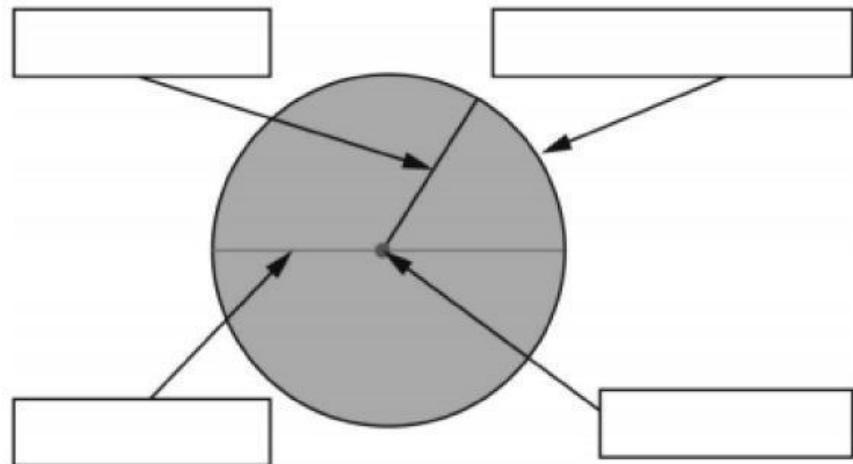
Q.4

Draw the set of points that are exactly 2.5 cm from the point C.

.C

Write down the order of rotational symmetry of these shapes.

a

b

c

d
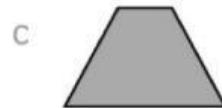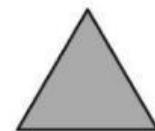
Order _____   Order _____   Order _____   Order _____

Write down the names of the seven special quadrilaterals.

_____   _____   _____   _____

_____   _____   _____

UNIT 6: Fractions and percentages

1   This square is divided into smaller squares.
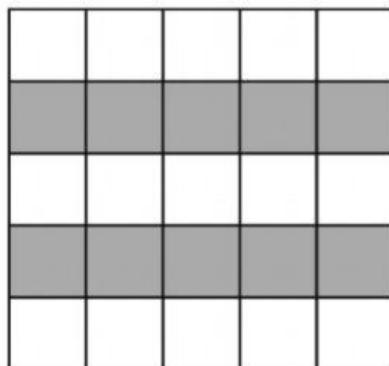
a   Write the percentage of the square that is shaded.

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{100} = \boxed{}\%$$

_____

> **Tip:** You could start by counting the total number of squares and the number of squares that are shaded.

b   Write the percentage as a fraction in its lowest terms.

_____

2   Simplify these fractions.

a $\dfrac{30}{100}$ b $\dfrac{16}{20}$ c $\dfrac{7}{28}$ d $\dfrac{12}{24}$

_____   _____   _____   _____

3   Write these fractions in order of size. Start with the smallest fraction.

$$\frac{1}{2} \quad \frac{5}{8} \quad \frac{1}{4} \quad \frac{7}{8} \quad \frac{3}{4}$$

> **Tip:** It could be useful to find equivalent fractions with the same denominator.

4   Find 10% of the quantity, then use your answer to find 20%, 30% and so on.
    Write the answers under the percentages on the number line.

0   10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

_____ _____ _____ _____ _____ $500

_____ _____ _____ _____ _____

$500
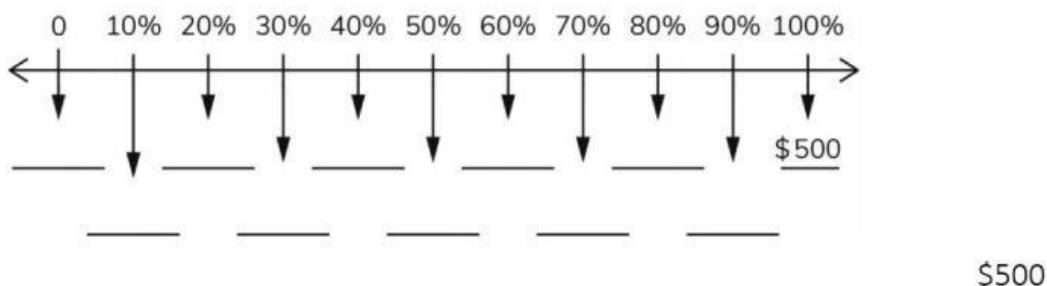
> **Tip:** Find 10% of $500 by dividing 500 by 10. Use that answer to find all the other answers.

5   Write these numbers in order of size, starting with the smallest.

$$\frac{1}{4} \quad 0.14 \quad 41\% \quad \frac{2}{5} \quad 0.26$$

> **Tip:** Write $\frac{1}{4}$ and $\frac{2}{5}$ as equivalent decimals or percentages.

UNIT 7 Area

1 Estimate the area of these triangles.
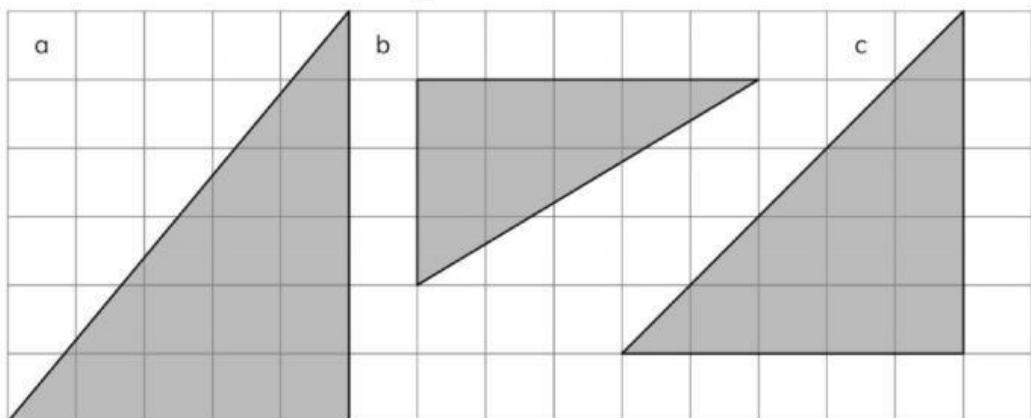
a _____   b _____   c _____

2 Work out the area of these triangles by finding the area of the rectangle first.

_____   _____   _____
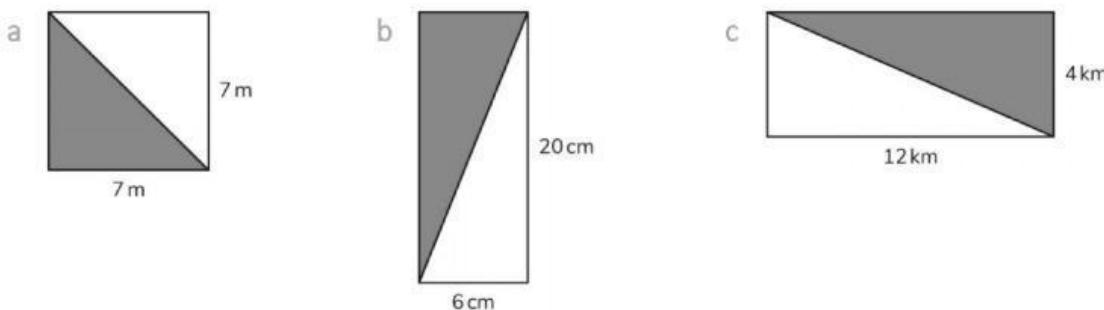
3   This is a rectangular field.

50 m

100 m
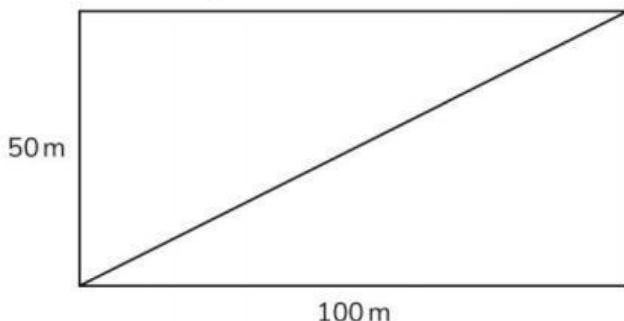
A farmer wants to divide the field into two parts with a diagonal line from corner to corner.

The farmer wants to put a donkey in one part of the field.

A donkey needs 2000 m^2 of space to be happy.

Is one part of the field big enough for the donkey?

Explain your answer.

_____

_____

_____

4   Write these times as hours and minutes.

a   1.5 hours   _____

b   5.1 hours   _____

c   14.25 hours _____

d   7.9 hours   _____

e   10.6 hours   _____

f   4.95 hours   _____

g   2.35 hours   _____

UNIT 8: Addition and subtraction

1. a   Work out $\dfrac{2}{5} + \dfrac{3}{7}$

LIVEWORKSHEETS

Calculation	Common denominator	Equivalent calculation	Answer
$\frac{2}{5} + \frac{3}{7}$			

b. Work out $\frac{1}{2} - \frac{3}{7}$

_____

0. Lee is 1.45 metres tall.

Omar is 0.2 metres shorter than Lee.

How tall is Omar?

_____

3. Work out the answers to the questions and find the numbers on the grid.

8.369	4.302	2.056
7.869	5.418	12.214
13.974	4.995	12.257

> **Tip:** Add trailing zeros to get the same number of decimal places.
> Remember 0.800 and 0.8 have the same value.

a.   4.618 + 0.8   b   0.456 + 1.6

_____   _____

c. 3.78 + 4.589   d   6.12 + 7.854

_____   _____

e. 4.31 + 0.685   f   7.57 + 4.687

_____   _____

14

UNIT 9: Probability

1 Describe the probability of these outcomes as a proportion.

1	2
3	4

  a   The chance of the spinner landing on 3 is _____ out of _____.

  b   The chance of the spinner landing on an odd number is _____ out of _____.

  c   The chance of the spinner landing on a number greater than 1 is _____ out of _____.

  d   The chance of the spinner landing on a number less than 5 is _____ out of _____.

1 Draw lines to match the words describing probability to the event.

  a   impossible   you will go to school next Wednesday

  b   unlikely   next month will have 32 days

  c   even chance   next month will have at least 28 days

  d   likely   you come to school by boat

  e   certain   you are asked to pick a month beginning with the letter A, and you choose April

2 Choose the correct answer.

  a   John was worried. His team wasn't very good and it was **likely / impossible** that they would lose.

  b   Elin and Amy were flipping coins. There was **a certain / an even** chance that half the coins would land on heads.