Year 6 Spring 2 Maths Activity Mat

1

Order the following numbers from smallest to largest, writing the answers in numerals:

Seven hundred and sixty-six thousand, seven hundred and sixty-six; seven hundred and sixty-seven thousand, seven hundred and seventy-seven; seven hundred and sixty-seven thousand, six hundred and seventy-six; seven hundred and sixty-six thousand, six hundred and seventy-seven.

2

Here are some estimated answers to some calculations. Tick the reasonable estimates.

☐ 508 × 12 ≈ 6000

☐ 9 231 409 – 5 791 231 ≈ 3 500 000

☐ 76 012 ÷ 17 ≈ 3000

Explain your answers.

_____

_____

3

A school has 21 classes of 28 children. The children are arranged into groups of eight. How many groups of eight children will there be?

_____

4

Simplify the following fractions.

$\frac{15}{27}$ $\frac{45}{}$

5

Calculate:

0.7 x 110 =

0.4 x 1001 =

0.9 x 1010 =

6

Convert the following:

8ml = _____ l

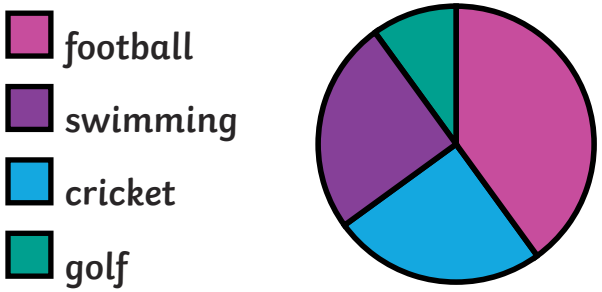
_____ cl = 0.093l

7

I have eight faces that are all triangles. What am I? Draw me.

8

Some children research children's favourite sports. They show the results in a pie chart.



40 children chose cricket. Estimate how many children chose each of the other sports?

Football _____

Golf _____

Swimming _____

Year 6 Spring 2 Maths Activity Mat

1

Write a number that is more than one million, where the sum of the digits is 36, all the digits are multiples of three but not 0, and no consecutive digits are equal.

_____

2

Three farms cover an area of 235 892 acres. One farm covers an area of 65 341 acres, another twice the area of the first. How many acres is the last farm?

_____

_____

3

Calculate:

$$2\_\overline{)\,998\_}\quad \_84$$

4

Use <, =, or > to compare these fractions.

$\frac{7}{5}$ $\frac{3}{2}$

$\frac{11}{\_}$ $\frac{8}{3}$

$\frac{17}{2}$ $\frac{\_}{8}$

5

Calculate:

0.8 x 0.5 =

0.9 x 0.06 =

0.07 x 0.04 =

6

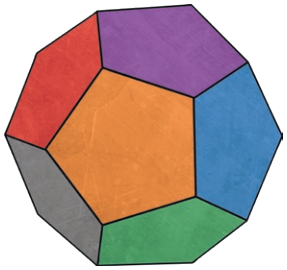
1 mile ≈ 1600m

A marathon is about 26 miles. How many kilometres is a marathon to the nearest 100m?

_____

7

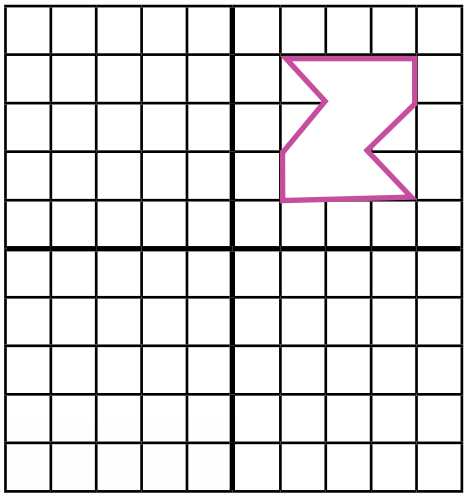
Name this shape.



_____

8

Reflect this shape about the thick black vertical lines anti-clockwise.



Year 6 Spring 2 Maths Activity Mat

1

Round the following numbers to the nearest five million.

22 500 000 →

27 500 000 →

67 490 000 →

2

Draw a Carroll diagram to write the common factors of 14 and 35.

3

What number, when halved, is a sixth of the sum of 34 and 14?

_____

4

Calculate:

$\frac{1}{\_} \times \frac{2}{\_} = \frac{1}{6}$ $\quad\quad$ $\frac{3}{\_} \times \frac{2}{3} = \frac{1}{5}$

$\frac{7}{8} \times \frac{4}{\_} = \frac{7}{10}$

5

Calculate, writing the answer as a decimal:

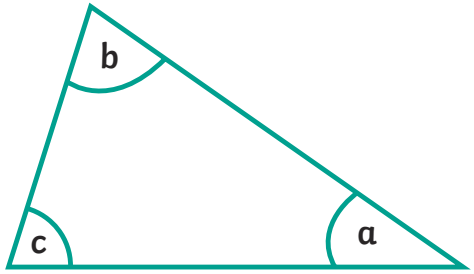
$16 \overline{)1066}$

6

Draw (not to scale) a rectangle with the same area as this rectangle, but with a different perimeter. Label the sides.

7

Estimate angles a,b and c.



_____

8

Find three pairs of numbers that satisfy these equations:

2a - 3b = 9

_____

_____

_____

4c + 3d = 25

_____

_____

_____

Year 6 Spring 2 Maths Activity Mat

1

The temperature in a freezer should be at 0°F. To convert F to C, use the following formula: C =(F-32) ×5/9 What should be the temperature in C in a freezer to the nearest tenth of a degree?

_____

2

Calculate in your head:

112 + 134 + 109 =

288 + 112 + 698 =

384 – 134 =

425 – (150 + 50) =

3

Calculate:

(2 + 9) × (7 - 2) =

12 - 4 × 5 + 8 =

(34 - 6) ÷ (9 - 2) =

4

Write an odd one out question with four fractions and a decimal where they are all equal except one number.

_____

5

The population of the United Kingdom has risen from 64.1 million in 2013 to 65.3 million in 2016. Estimate the annual increase in the population of the UK to the nearest hundred thousand.

_____

6

Write the dimensions of three cuboids with a volume of 42 cm^3, where the edges are all whole centimetres.

_____

7

Draw two concentric circles where the radius of one circle is twice that of the other. (Concentric means same centre.)

8

The average of five whole numbers is 35.4. If the smallest number is 15, what is the largest number possible?

_____

Year 6 Spring 2 Maths Activity Mat

1

Use these clues to find the number:

- This is a seven-digit number.
- The digits all add up to 37.
- There are only two different digits and no consecutive digits are the same.
- There are odd and even digits.

_____

2

Find the missing numbers in this calculation.

$$\begin{array}{r} 9\ \_\ 1\ 6 \\ \times\quad \_\ 7 \\ \hline 6\ 4\ 5\ 1\ 2 \\ 4\ 6\ 0\ 8\ 0\ 0 \\ \hline \end{array}$$

_____

3

Write 3.875 as an improper fraction?

_____

4

A shop sells four sizes of Easter eggs. Altogether it sells 10 351 eggs. 2617 small eggs are sold. Twice as many medium eggs as small eggs are sold. Of the remaining eggs, 75% are large and the rest are extra large. How many medium, large and extra large eggs are sold?

_____

5

Complete:

$\frac{3}{\_} \div 2 = \frac{3}{8}$ $\qquad$ $\frac{\_}{5} \div 4 = \frac{1}{10}$

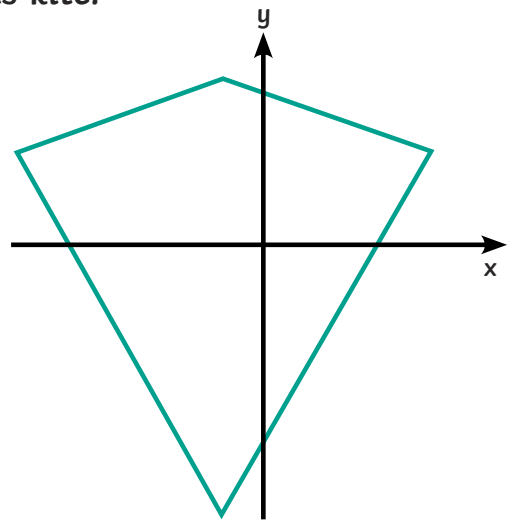
6

Alex makes a drink for a party of 24 children. He uses three types of juice in the ratio 2:3:1. He uses 1.75l of the juice of which he uses the least. How much drink would each child have if the drink was shared equally?

_____

7

Write possible coordinates for this kite.



_____

8

a and b are whole numbers between 4 and 10. Write all the combinations showing the possible values of a and b where:

$3a - b = 9$

_____

_____

Year 6 Spring 2 Maths Activity Mat

1

Anita buys some packs of chocolate eggs. She has 32 plain chocolate eggs, 20 milk chocolate eggs and 12 milk chocolate eggs. There are 16 eggs in a pack. How many of each egg are in a pack?

_____

2

$2y = 5x + 9$

If $x = 3$, what is y? _____

If $y = 7$, what is x? _____

3

Calculate:

13% of £72 =

37.5% of £186 =

4

Calculate:

$\frac{7}{20} + \frac{2}{5} + \frac{1}{10} =$ $\frac{1}{4} - \frac{3}{16} =$

5

For Comic Relief, a school has three activities. The children pay £1.50 to wear red, there is a bake sale, and the children can pay £2 to throw a wet sponge at a teacher. Altogether, the children raised £528.50. 167 children wore red, and 97 children paid to throw a wet sponge at a teacher. How much did the bake sale make?

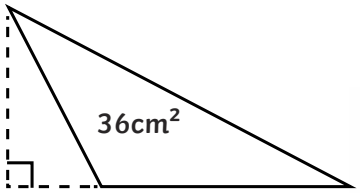
_____

6

The area of this triangle is 36cm². The height is half the length of the base of the triangle. What are the dimensions of the triangle?

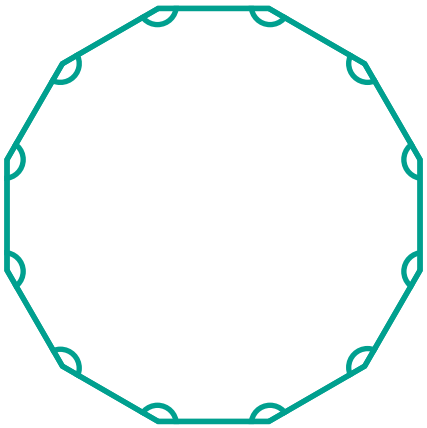
_____

_____



7

Calculate the angles in this regular dodecagon:



_____

8

Express the answer to this word problem algebraically, using h to represent the number hours Toby is awake in a day, when he wakes up at 7am and goes to sleep at 8pm.

_____

_____

Year 6 Spring 2 Maths Activity Mat

1

Order the following numbers from smallest to largest, writing the answers in numerals:

Seven hundred and sixty-six thousand, seven hundred and sixty-six; seven hundred and sixty-seven thousand, seven hundred and seventy-seven; seven hundred and sixty-seven thousand, six hundred and seventy-six; seven hundred and sixty-six thousand, six hundred and seventy-seven.

766 677	766 766	767 676	767 777

2

Here are some estimated answers to some calculations. Tick the reasonable estimates.

☑ 508 × 12 ≈ 6000

5 × 12 = 60, 500 × 12 = 6000

☐ 9 231 409 – 5 791 231 ≈ 3 500 000

9.2 – 5.7 = 3.5, so 9 200 000 – 5 700 000 = 3 500 000

☐ 76 012 ÷ 17 ≈ 3000

17 × 4 = 68, so 68 ÷ 17 = 4, so 76 ÷ 17 ≈ 4.5, so 76 000 ÷ 17 ≈ 4 500

3

A school has 21 classes of 28 children. The children are arranged into groups of eight. How many groups of eight children will there be?

73 groups (four children left over)

4

Simplify the following fractions.

$\frac{15}{27} = \frac{5}{9}$ $\frac{45}{-} = \frac{3}{5}$

5

Calculate:

0.7 x 110 = **77**

0.4 x 1001 = **400.4**

0.9 x 1010 = **909**

6

Convert the following:

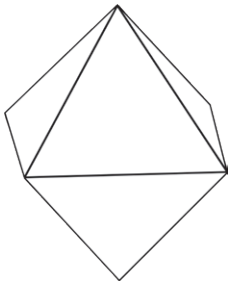
8ml = **0.008l**

9.3cl = 0.093l

7

I have eight faces that are all triangles. What am I? Draw me.

An octahedron



8

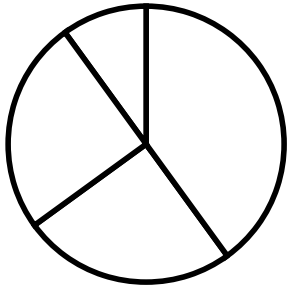
Some children research children's favourite sports. They show the results in a pie chart.

☐ football

☐ swimming

☐ cricket

☐ golf



Football **64**
Golf **16**
Swimming **40**
(Swimming should be 40 as it's the same as cricket, football and golf must add up to 80 but could be 63/17 to 65/15)

Year 6 Spring 2 Maths Activity Mat

1

Write a number that is more than one million, where the sum of the digits is 36, all the digits are multiples of three but not 0, and no consecutive digits are equal.

Any number meeting the criteria:

e.g. 3 639 636

2

Three farms cover an area of 235 892 acres. One farm covers an area of 65 341 acres, another twice the area of the first. How many acres is the last farm?

39 869 acres

3

Calculate:

$$26 \overline{)\,9984} = 384$$

4

Use <, =, or > to compare these fractions.

$\frac{7}{5} < \frac{3}{2}$

$\frac{11}{4} > \frac{8}{3}$

$\frac{17}{2} = \frac{68}{8}$

5

Calculate:

0.8 x 0.5 = **0.4**

0.9 x 0.06 = **0.054**

0.07 x 0.04 = **0.0028**

6

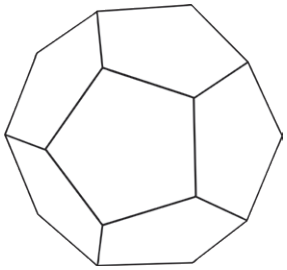
1 mile ≈ 1600m

A marathon is about 26 miles. How many kilometres is a marathon to the nearest 100m?

41.6km

7

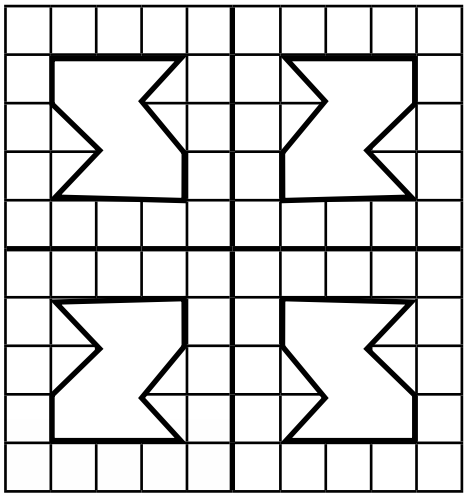
Name this shape.



dodecahedron

8

Reflect this shape about the thick black vertical lines anti-clockwise.



Year 6 Spring 2 Maths Activity Mat

1

Round the following numbers to the nearest five million.

22 500 000 → **25 000 000**

27 500 000 → **30 000 000**

67 490 000 → **65 000 000**

2

Draw a Carroll diagram to write the common factors of 14 and 35.

	Factor of 14	Not a factor of 14
Factor of 35	**1, 7**	**5, 35**
Not a factor of 35	**2, 14**	**3, 4, 6, 8 – 13, 15 – 34, 36 and higher**

3

What number, when halved, is a sixth of the sum of 34 and 14?

16

4

Calculate:

$\frac{1}{-} \times \frac{2}{3} = \frac{1}{6}$ $\frac{3}{-} \times \frac{2}{3} = \frac{1}{5}$

$\frac{7}{8} \times \frac{4}{5} = \frac{7}{10}$

5

Calculate, writing the answer as a decimal:

66.625

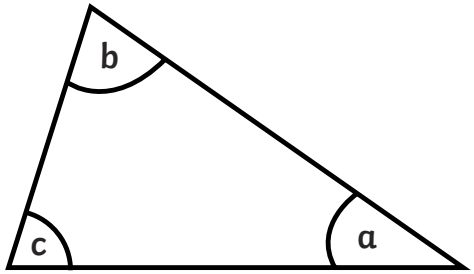
6

Draw (not to scale) a rectangle with the same area as this rectangle, but with a different perimeter. Label the sides.

Various answers including 6 x 6cm, 12 x 3 cm, 18 x 2 cm, 36 x 1 cm

7

Estimate angles a,b and c.



Angles must be reasonable and add up to 180°. E.g a = 35°, b = 75°, c = 70°

8

Find three pairs of numbers that satisfy these equations:

2a - 3b = 9

a = 6, b = 1;

a = 9, b = 3;

a = 12, b = 5

4c + 3d = 25

c = 1, d = 7;

c = 4, d = 3;

c = 7, d = -1

Year 6 Spring 2 Maths Activity Mat

1

The temperature in a freezer should be at 0°F. To convert F to C, use the following formula: C =(F-32) ×5/9 What should be the temperature in C in a freezer to the nearest tenth of a degree?

-17.8°C

2

Calculate in your head:

112 + 134 + 109 = **355**

288 + 112 + 598 = **998**

384 – 134 = **250**

425 – (150 + 50) = **225**

3

Calculate:

(2 + 9) × (7 - 2) = **55**

12 - 4 × 5 + 8 = **0**

(34 - 6) ÷ (9 - 2) = **4**

4

Write an odd one out question with four fractions and a decimal where they are all equal except one number.

various answers

5

The population of the United Kingdom has risen from 64.1 million in 2013 to 65.3 million in 2016. Estimate the annual increase in the population of the UK to the nearest hundred thousand.

400 000

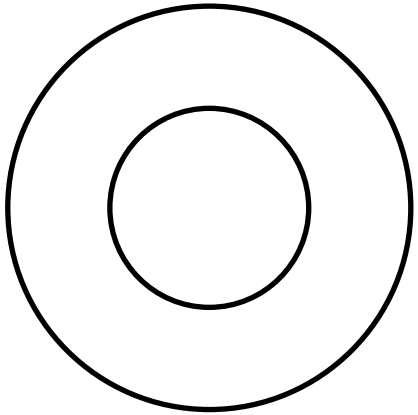
6

Write the dimensions of three cuboids with a volume of 42 cm^3, where the edges are all whole centimetres.

Various answers including: 42 ×1 ×1, 21 × 2 × 1, 7 × 3 × 2, 7 × 6 × 1.

7

Draw two concentric circles where the radius of one circle is twice that of the other. (Concentric means same centre.)



8

The average of five whole numbers is 35.4. If the smallest number is 15, what is the largest number possible?

117 (when all the other 4 numbers are 15)

Year 6 Spring 2 Maths Activity Mat

1

Use these clues to find the number:

- This is a seven-digit number.
- The digits all add up to 37.
- There are only two different digits and no consecutive digits are the same.
- There are odd and even digits.

4 747 474

2

Find the missing numbers in this calculation.

$$\begin{array}{r} {\scriptstyle 1\ 1\ 4\ \ } \\ 9\ 2\ 1\ 6 \\ \times\quad 5\ 7 \\ \hline 6\ 4\ 5\ 1\ 2 \\ 4\ 6\ 0\ 8\ 0\ 0 \\ \hline 5\ 2\ 5\ 3\ 1\ 2 \\ \hline {\scriptstyle 1\ \ \ \ \ \ } \end{array}$$

3

Write 3.875 as an improper fraction?

$\frac{31}{8}$

4

A shop sells four sizes of Easter eggs. Altogether it sells 10 351 eggs. 2617 small eggs are sold. Twice as many medium eggs as small eggs are sold. Of the remaining eggs, 75% are large and the rest are extra large. How many medium, large and extra large eggs are sold?

5234 medium, 1875 large, 625 extra large

5

Complete:

$\frac{3}{\square} \div 2 = \frac{3}{8}$ $\qquad$ $\frac{2}{5} \div 4 = \frac{1}{10}$

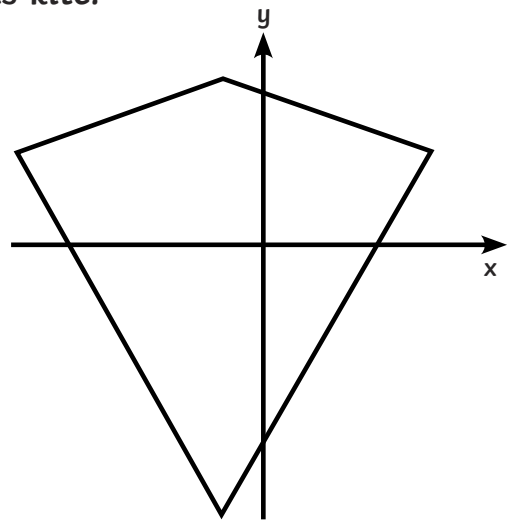
6

Alex makes a drink for a party of 24 children. He uses three types of juice in the ratio 2:3:1. He uses 1.75l of the juice of which he uses the least. How much drink would each child have if the drink was shared equally?

437.5ml or 0.4375l

7

Write possible coordinates for this kite.



Various answers

8

a and b are whole numbers between 4 and 10. Write all the combinations showing the possible values of a and b where:

$3a - b = 9$

a = 5, b = 6; a = 6, b = 9;

Year 6 Spring 2 Maths Activity Mat

1

Anita buys some packs of chocolate eggs. She has 32 plain chocolate eggs, 20 milk chocolate eggs and 12 milk chocolate eggs. There are 16 eggs in a pack. How many of each egg are in a pack?

8 plain, 5 milk, 3 white chocolate eggs

2

$2y = 5x + 9$

If $x = 3$, what is y? **12**

If $y = 7$, what is x? **1**

3

Calculate:

13% of £72 = **£9.36**

37.5% of £186 = **£69.75**

4

Calculate:

$\frac{7}{20} + \frac{2}{5} + \frac{1}{10} = \frac{}{5}$ $\quad \frac{1}{4} - \frac{3}{16} = \frac{1}{16}$

5

For Comic Relief, a school has three activities. The children pay £1.50 to wear red, there is a bake sale, and the children can pay £2 to throw a wet sponge at a teacher. Altogether, the children raised £528.50. 167 children wore red, and 97 children paid to throw a wet sponge at a teacher. How much did the bake sale make?

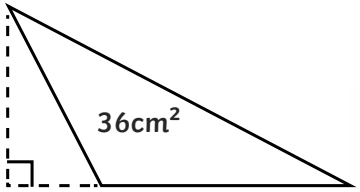
£84

6

The area of this triangle is 36cm². The height is half the length of the base of the triangle. What are the dimensions of the triangle?

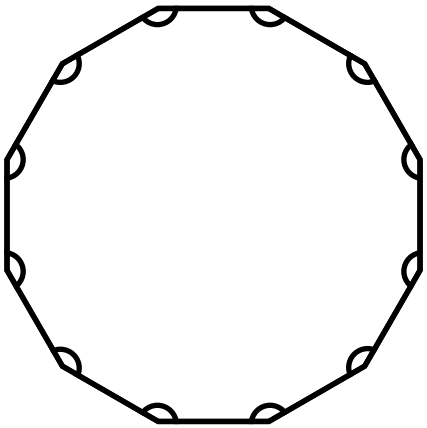
base 12cm

height 6cm



7

Calculate the angles in this regular dodecagon:



150°

8

Express the answer to this word problem algebraically, using h to represent the number hours Toby is awake in a day, when he wakes up at 7am and goes to sleep at 8pm.

h = 24 – 11

h = 24 – (7 + 4)