# **Year 6 Spring 1** Maths Activity Mat 1

## Section 1

Order the following numbers from smallest to largest:

**494 449** **449 949** **494 949** **449 499** **494 944**

| | | | | |
|---|---|---|---|---|
| | | | | |

smallest largest

## Section 2

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

☐ 351 × 22≈ 7000

☐ 7 902 814 - 4 206 394≈ 3700 000

☐ 8024 ÷ 40≈ 200

Explain your answers.

## Section 3

A farmer picks 428 apples. He packs them in boxes of 15 apples. How many more apples are needed to fill 30 boxes?

☐

## Section 4

Simplify the following fractions:

$\frac{6}{30}$ = ☐ $\frac{24}{32}$ = ☐

## Section 5

Calculate:

0.9 × 100 = ☐

0.3 × 1000 = ☐

0.7 × 1100 = ☐

## Section 6

Convert the following:

2g = _____kg

_____g = 0.45kg

## Section 7

Write a description of a tetrahedron.

_____

_____

_____

_____

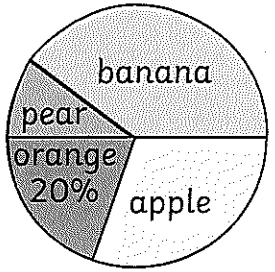
_____

_____

_____

## Section 8

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




30 children were asked about their favourite fruit. How many children chose each fruit?

Apple ☐ Pear ☐

Banana ☐ Orange ☐

# **Year 6 Spring 1** Maths Activity Mat 1 - Answers

## Section 1

Order the following numbers from smallest to largest:

| 494 449 | 449 949 | 494 949 | 449 499 | 494 944 |
|---|---|---|---|---|

| 449 499 | 449 949 | 494 449 | 494 944 | 494 949 |
|---|---|---|---|---|

smallest largest

## Section 2

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

351×22≈7000 no, 350×20=7000 so 750×22=7700, so 7500-7700 is a better estimate

7 902 814-4206 394≈3700 000, yes 7.9 million –4.2 million ≈ 3.7 million

8024÷40≈200 yes 8024÷4≈2000 so estimate is reasonable.

## Section 3

A farmer picks 428 apples. He packs them in boxes of 15 apples. How many more apples are needed to fill 30 boxes?

22

## Section 4

Simplify the following fractions:

$\frac{6}{30} = \frac{1}{5}$ $\frac{24}{32} = \frac{3}{4}$

## Section 5

Calculate:

0.9 × 100 = 90

0.3 × 1000 = 300

0.7 × 1100 = 770

## Section 6

Convert the following:

2g =0.002kg

450g = 0.45kg

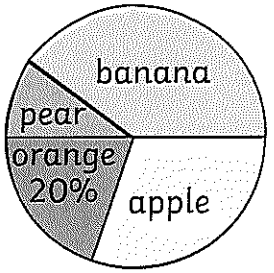
## Section 7

Write a description of a tetrahedron.

A tetrahedron has four triangular faces. One triangle is the base of the shape. At each edge of the base triangle, one edge of one of the other three triangles is attached. One edge of each of these triangles meet the adjacent edge of the next triangle. The three meet at a point.

## Section 8

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




30 children were asked about their favourite fruit. How many children chose each fruit?

Apple 9 Pear 3

Banana 12 Orange 6

# **Year 6 Spring 1** Maths Activity Mat 2

## Section 1

Write a number that is between four and five million, where the sum of the thousands and tens digit is twice the difference between the hundred thousands and hundreds digits.

## Section 2

A theatre sells 1986 tickets. 234 more adult tickets are sold than child tickets, and 186 more child tickets are sold than student tickets. How many child tickets are sold?

## Section 3

Find the missing numbers.

$$\begin{array}{r} 35\square \\ 2\square\overline{)\,9\square 04} \end{array}$$

## Section 4

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

$\frac{17}{5}$ ☐ $\frac{10}{3}$

$\frac{23}{8}$ ☐ $\frac{17}{6}$

$\frac{22}{3}$ ☐ $\frac{66}{9}$

## Section 5

Calculate:

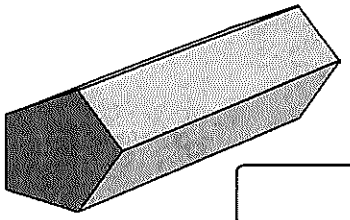
0.4×0.4 =

0.8×0.03 =

0.07×0.06 =

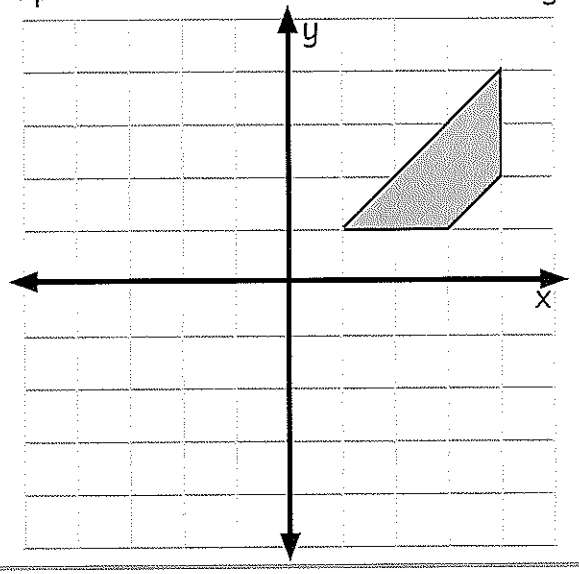
## Section 7

Name this shape.



## Section 8

Reflect this shape about the x axis and then the y axis.




## Section 6

5 miles is 8 km

How many metres in one mile?

# **Year 6 Spring 1** Maths Activity Mat 2 - Answers

## Section 1

Write a number that is between four and five million, where the sum of the thousands and tens digit is twice the difference between the hundred thousands and hundreds digits.

Any number meeting the criteria
e.g. 4 372 884

## Section 2

A theatre sells 1986 tickets. 234 more adult tickets are sold than child tickets, and 186 more child tickets are sold than student tickets. How many child tickets are sold?

646

## Section 3

Find the missing numbers.

$$26\overline{)9204} = 354$$

## Section 4

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

$\frac{17}{5}$ > $\frac{10}{3}$

$\frac{23}{8}$ > $\frac{17}{6}$

$\frac{22}{3}$ = $\frac{66}{9}$

## Section 5

Calculate:

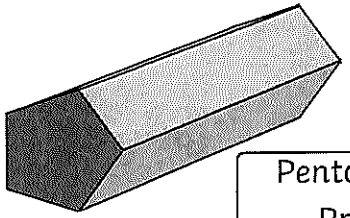
0.4×0.4 = 0.16

0.8×0.03 = 0.024

0.07×0.06 = 0.0042

## Section 7

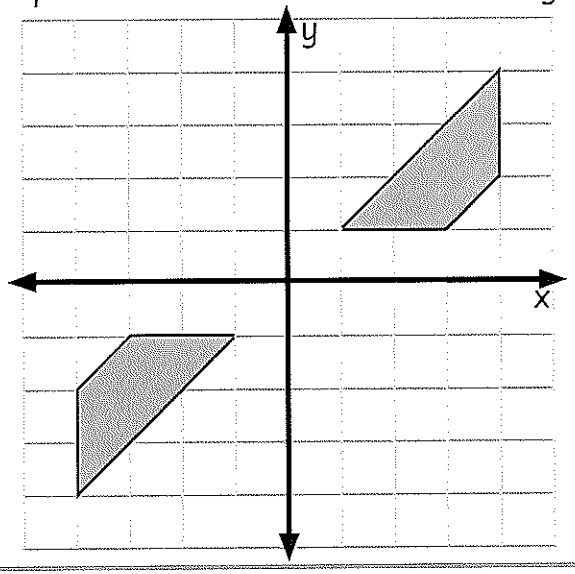
Name this shape.



Pentagonal Prism

## Section 8

Reflect this shape about the x axis and then the y axis.




## Section 6

5 miles is 8 km

How many metres in one mile?

1600m

# **Year 6 Spring 1** Maths Activity Mat 3

## Section 1

Round the following numbers to the nearest 10 000 000.

18 451 907 ☐

72 500 000 ☐

22 250 000 ☐

## Section 2

Draw a Venn Diagram to show the common factors of 9, 21, 36

## Section 3

What number, when doubled, is a fifth of the difference between of 36 and 71?

☐

## Section 4

Write three unit fractions that multiply to give $\frac{1}{30}$.

☐ × ☐ × ☐ = $\frac{1}{30}$

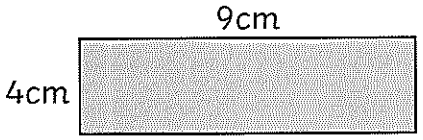
## Section 5

Calculate, writing the answer as a decimal:

$8\overline{)831}$

## Section 6

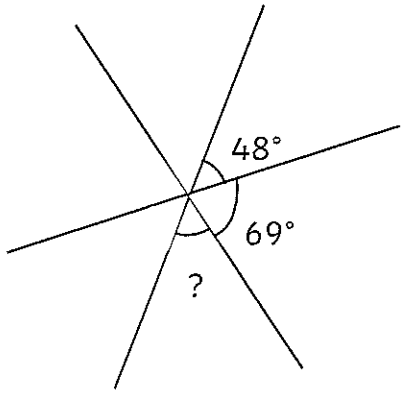
Draw (not to scale) a rectangle with the same area as this rectangle, but with a different perimeter. Label the sides.




*not to scale

## Section 7

Calculate the unknown angle.




☐

*not to scale

## Section 8

Find three pairs of numbers that satisfy these equations:

$3a + 2b = 15$

$3c - 2d = 10$

# **Year 6 Spring 1** Maths Activity Mat 3

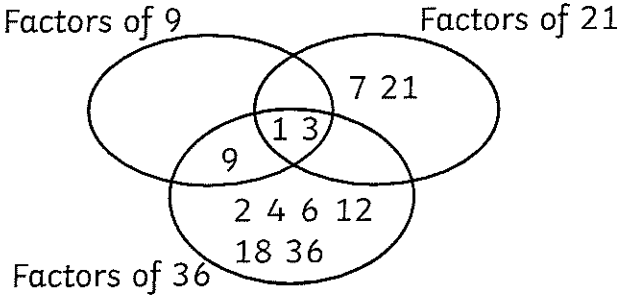
## Section 1

Round the following numbers to the nearest 10 000 000.

| | |
|---|---|
| 18 451 907 | 20 000 000 |
| 72 500 000 | 70 000 000 |
| 22 250 000 | 20 000 000 |

## Section 2

Draw a Venn Diagram to show the common factors of 9, 21, 36




## Section 3

What number, when doubled, is a fifth of the difference between of 36 and 71?

3.5

## Section 4

Write three unit fractions that multiply to give $\frac{1}{30}$.

$\frac{1}{2} \times \frac{1}{3} \times \frac{1}{5} = \frac{1}{30}$

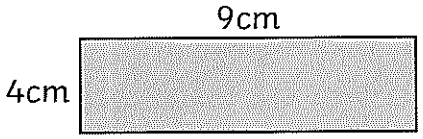
## Section 5

Calculate, writing the answer as a decimal:

$$8\overline{)831} = 103.875$$

## Section 6

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

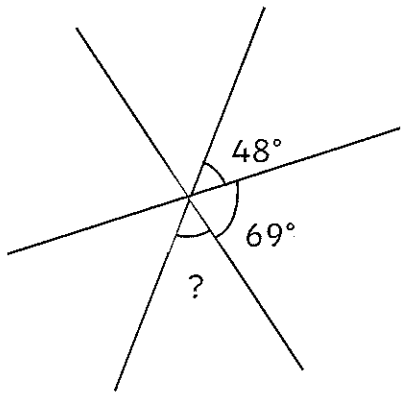



Various answer,s including:
6 × 6cm 12 × 3cm, 18 × 2cm, 36 × 1cm

*not to scale

## Section 7

Calculate the unknown angle.




63°

*not to scale

## Section 8

Find two pairs of numbers that satisfy these equations:

$3a + 2b = 15$

$3c - 2d = 10$

a = 3, b = 3;

a = 5, b = 0.

c=6, d=4; c=10, d=10.

# **Year 6 Spring 1** Maths Activity Mat 4

## Section 1

The gas nitrogen liquefies at -196°C and freezes at -210°C. What is the difference between these temperatures?

## Section 2

Calculate in your head:

461 + 237 + 84 =

450 + 287 + 163 =

692 – 461 =

792 – (129 + 41) =

## Section 3

Calculate:

12 × (☐ – 9) = 84

36 + ☐ × 9 = 108

(12 + 9) ÷ ☐ = 3

## Section 4

Calculate the decimal equivalent of $\frac{1}{12}$ .

## Section 5

George and Emily each have a collection of stamps. They decide to put their collections together. George has 583 in his book and Emily has 492. They have 23 and 89 respectively to stick in the books. They also buy some stamps at a fair. They now have 1200 stamps, rounded to the nearest 100. What is the most number of stamps they could have bought at the fair?

## Section 6

Write the dimensions of five cuboids with a volume of 24cm$^3$, where the edges are all whole centimetres.

## Section 7

Draw a circle. Draw and label the circumference and diameter.

## Section 8

One number is missing from this set of numbers, but the mean is 18. What number is missing?

3, 19, 15, 28, ..... ?

# **Year 6 Spring 1** Maths Activity Mat 4 - Answers

## Section 1

The gas nitrogen liquefies at -196°C and freezes at -210°C. What is the difference between these temperatures?

14°C

## Section 2

Calculate in your head:

461 + 237 + 84 = 782

450 + 287 + 163 = 900

692 – 461 = 231

792 – (129 + 41) = 622

## Section 3

Calculate:

12 × ( 16 – 9) = 84

36 + 8 × 9 = 108

(12 + 9) ÷ 7 = 3

## Section 4

Calculate the decimal equivalent of $\frac{1}{12}$ .

0.083 or 0.0833

## Section 5

George and Emily each have a collection of stamps. They decide to put their collections together. George has 583 in his book and Emily has 492. They have 23 and 89 respectively to stick in the books. They also buy some stamps at a fair. They now have 1200 stamps, rounded to the nearest 100. What is the most number of stamps they could have bought at the fair?

62 stamps making a maximum of 1249

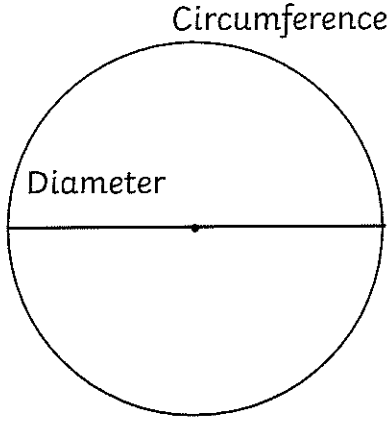
## Section 6

Write the dimensions of five cuboids with a volume of 24cm$^3$, where the edges are all whole centimetres.

24 × 1 × 1, 12 × 2 × 1, 6 × 4 × 1, 6 × 2 × 2, 8 × 3 × 1

## Section 7

Draw a circle. Draw and label the circumference and diameter.




## Section 8

One number is missing from this set of numbers, but the mean is 18. What number is missing?

3, 19, 15, 28, ..... ?

25

# **Year 6 Spring 1** Maths Activity Mat 5

## Section 1

- Use these clues to find the number:
- This is a seven-digit number.
- There are only two different digits.
- No adjacent digits are the same.
- The total of the digits is 35.

## Section 2

Find the missing numbers in this calculation.

| | | | | | |
|---|---|---|---|---|---|
| | | □ | 5 | □ | 2 |
| × | | | | 3 | □ |
| | 4 | 6 | 0 | 7 | □ |
| 1 | 9 | □ | 4 | 6 | 0 |
| 2 | □ | 3 | 5 | 3 | □ |

## Section 3

A collector has 2792 coins altogether. Half of the coins are on display. The collector buys more coins at an auction so that the coins on display are now 40% of the collection. How many coins are bought at the auction?

## Section 4

Calculate:

$\frac{3}{8} \div 5 =$

$\frac{2}{5} \div 6 =$

## Section 5

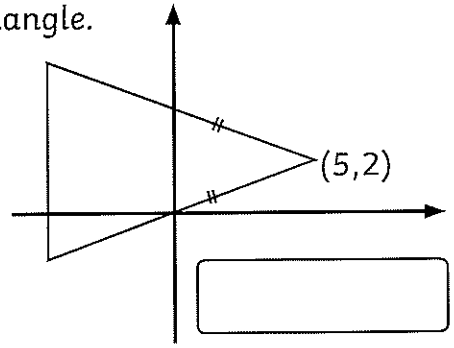
75% of a class are going on a residential visit. Three fifths of the children going on the visit are boys. What percentage of the children going on the visit are girls?

## Section 6

Some lemonade and juice is mixed in the ratio 2:3. The juice is shared among 25 people, with each receiving 350ml. The juice is provided in 250ml cartons. How many cartons of juice are used to make the drink?

## Section 7

Write possible missing coordinates for this isosceles triangle.




## Section 8

a and b are whole numbers between 3 and 10. Write all the calculations showing the possible values of a and b where: 2a - b = 10

# **Year 6 Spring 1** Maths Activity Mat 5 - Answers

## Section 1

- Use these clues to find the number:
- This is a seven-digit number.
- There are only two different digits.
- No adjacent digits are the same.
- The total of the digits is 35.

2 929 292

## Section 2

Find the missing numbers in this calculation.

| | | ~~1~~ 4 | ~~2~~ 5 | 1 | |
|---|---|---|---|---|---|
| | | 6 | 5 | 8 | 2 |
| × | | | | 3 | 7 |
| | 4 | 6 | 0 | 7 | 4 |
| 1 | 9 | 7 | 4 | 6 | 0 |
| 2 | 4 | 3 | 5 | 3 | 4 |
| 1 | 1 | | 1 | | |

## Section 3

A collector has 2792 coins altogether. Half of the coins are on display. The collector buys more coins at an auction so that the coins on display are now 40% of the collection. How many coins are bought at the auction?

698 Coins

## Section 4

Calculate:

$\frac{3}{8} \div 5 = \frac{3}{40}$

$\frac{2}{5} \div 6 = \frac{2}{30}$ or $\frac{1}{15}$

## Section 5

75% of a class are going on a residential visit. Three fifths of the children going on the visit are boys. What percentage of the children going on the visit are girls?

40%

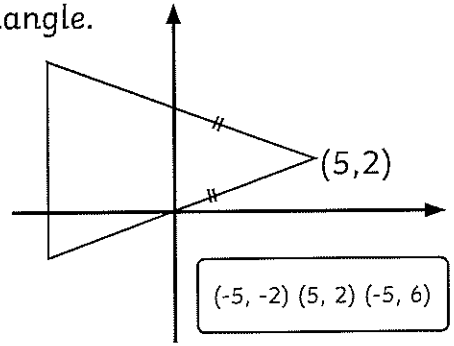
## Section 6

Some lemonade and juice is mixed in the ratio 2:3. The juice is shared among 25 people, with each receiving 350ml. The juice is provided in 250ml cartons. How many cartons of juice are used to make the drink?

21 cartons

## Section 7

Write possible missing coordinates for this isosceles triangle.




(-5, -2) (5, 2) (-5, 6)

## Section 8

a and b are whole numbers between 3 and 10. Write all the calculations showing the possible values of a and b where: 2a - b = 10

a = 7, b = 4; a = 8, b = 6;

a = 9, b = 8

# **Year 6 Spring 1** Maths Activity Mat 6

## Section 1

Packets of pens contain four blue, two red, one green and three black pens. Asjal says that if he buys enough packets to get at least 10 blue and eight black pens, he will have five red and two green pens. Explain why Asjal is incorrect.

## Section 2

$$y = 8 - x$$

If x = 5, what is y?

If y = -2, what is x?

## Section 3

Calculate

16% of £39 =

69% of £107 =

## Section 4

Calculate:

$\frac{1}{10} + \frac{1}{5} + \frac{1}{15} =$

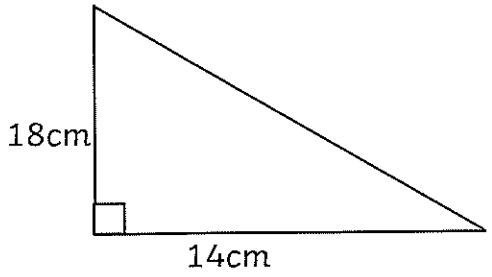
$\frac{3}{4} - \frac{3}{20} =$

## Section 5

There were 53 people in a cinema. Coffee costs £2.75 and tea £1.60. The takings for tea is £46.40 The total takings were £112.40. How many people drank coffee?

## Section 6

Calculate the area of this triangle.




## Section 7

Write the name of a regular shape with internal angles of 135°.

## Section 8

Aisha has somepencils. N is the number of new pencils, q is the number of blunt pencils and r is the number of freshly sharpened pencils. Express the total number of pencils algebraically, using p to represent the total number of pencils.

# **Year 6 Spring 1** Maths Activity Mat 6 - Answers

## Section 1

Packets of pens contain four blue, two red, one green and three black pens. Asjal says that if he buys enough packets to get at least 10 blue and eight black pens, he will have five red and two green pens. Explain why Asjal is incorrect.

Asjal will buy three packets giving him 12 blue and nine black pens, also he will have six red pens and three green pens.

## Section 2

$$y = 8 - x$$

If x = 5, what is y? 3

If y = -2, what is x? 10

## Section 3

Calculate

16% of £39 = £6.24

69% of £107 = £73.83

## Section 4

Calculate:

$\frac{1}{10} + \frac{1}{5} + \frac{1}{15} = \frac{11}{30}$

$\frac{3}{4} - \frac{3}{20} = \frac{12}{20}$

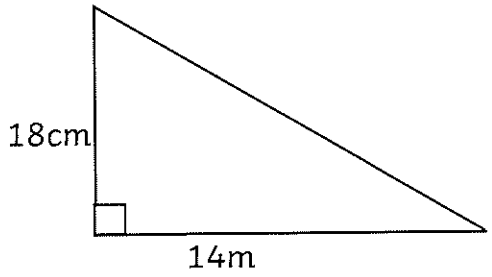
## Section 5

There were 53 people in a cinema. Coffee costs £2.75 and tea £1.60. The takings for tea is £46.40 The total takings were £112.40. How many people drank coffee?

24

## Section 6

Calculate the area of this triangle.




126cm$^2$

## Section 7

Write the name of a regular shape with internal angles of 135°.

regular octagon

## Section 8

Aisha has somepencils. N is the number of new pencils, q is the number of blunt pencils and r is the number of freshly sharpened pencils. Express the total number of pencils algebraically, using p to represent the total number of pencils.

p = n + q + r