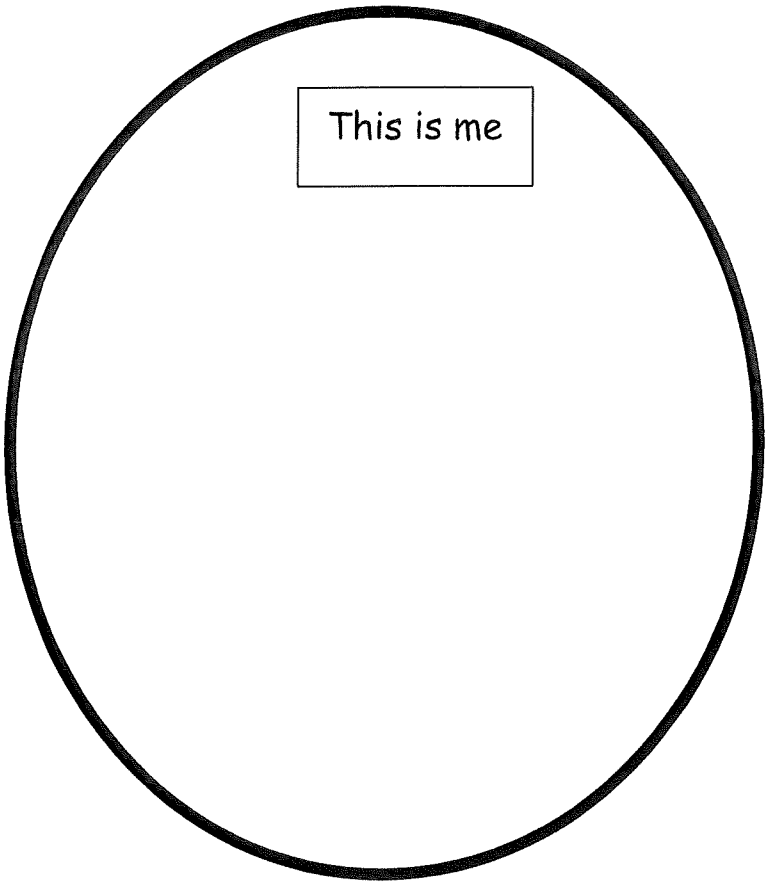
Year 6 Home Learning Booklet 2



Name:

Diary

Monday	
Tuesday	
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Monday	
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Friday	

Reading Log

Date	Title	Page	Comments

Year 6

Mathematics

Arithmetic: Paper 3

Name	
Date	

/40
total marks

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1 79 x 7 =

1 mark

2 1067 - 100 =

1 mark

3 7.1 + 0.2 =

1 mark

Total for this page

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4 21 x 7 =

1 mark

5 2687 + 698 =

1 mark

6 12 x 11 =

1 mark

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7 $596 + 7 =$

1 mark

8 $\frac{7}{9} - \frac{2}{9} =$

1 mark

9 $232 \times 0 =$

1 mark

Total for this page

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10 $0.2 + 0.04 =$

1 mark

11 $5^2 + 2^2 =$

1 mark

12 $2.172 \times 1000 =$

1 mark

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13 ☐ = 8825 + 7061

1 mark

14 $\frac{1}{6} + \frac{5}{6} =$

1 mark

15 8 x 800 =

1 mark

Total for this page

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16 10 x 1000 =

1 mark

17 307 - 24.7 =

1 mark

18 1080 ÷ 9 =

1 mark

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19 20% of 1800 =

1 mark

20 6.01 x 7 =

1 mark

21 90 000 - 90 =

1 mark

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22 20.3 - 12.09 =

1 mark

23 7045 ÷ 4 =

1 mark

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24 57 x 28 =

	5	7
x	2	8

2 marks

25 134 905 - 117 567 =

1 mark

Total for this page

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26 $\frac{2}{3} \times \frac{1}{3} =$

1 mark

27 $3612 \div 12 =$

$$12 \overline{)3612}$$

2 marks

Total for this page

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28 $\frac{2}{5} \div 2 =$

1 mark

29 $15 \times 1\frac{1}{2} =$

1 mark

30 $1\frac{7}{10} + \frac{2}{3} =$

1 mark

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31 912 x 67 =

	9	1	2
x		6	7

2 marks

32 25 ÷ (12 - 7) =

1 mark

Total for this page

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33 65% of 360 =

1 mark

34 $\frac{3}{4} - \frac{1}{5} =$

1 mark

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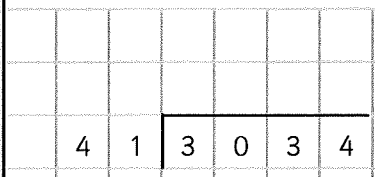
35 $3034 \div 41 =$



2 marks

36 $\frac{1}{5} \div 3 =$

1 mark

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Answer Sheet: Key Stage 2: arithmetic paper 3

Guidance: Children will have 30 minutes for this test. Long division and long multiplication questions are worth **2 marks** each. Children will be awarded 2 marks for a correct answer. They may get 1 mark for showing a formal method. All other questions are worth 1 mark each.

question	answer	marks
1	**553**	1
2	**967**	1
3	**7.3**	1
4	**147**	1
5	**3385**	1
6	**132**	1
7	**603**	1
8	$\frac{5}{9}$	1
9	**0**	1
10	**0.24**	1
11	**29**	1
12	**2172**	1
13	**15 886**	1
14	**1 or** $\frac{6}{6}$	1
15	**6400**	1
16	**10 000**	1
17	**282.3**	1
18	**120**	1
19	**360**	1
20	**42.07**	1
21	**89 910**	1

question	answer	marks
22	**8.21**	1
23	**1761.25** or **1761r1**	1
24	**1596**	2
25	**17 338**	1
26	$\frac{2}{9}$	1
27	**301**	2
28	$\frac{1}{5}$	1
29	**22** $\frac{1}{2}$	1
30	**2** $\frac{11}{30}$	1
31	**61 104**	2
32	**5**	1
33	**234**	1
34	$\frac{11}{20}$	1
35	**74**	2
36	$\frac{1}{15}$	1
		Total 40

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Year 6 Spring 1 Maths Activity Mat 6

Section 1

A packet of pens has one red, two black and three blue pens. Muna needs eight black pens. How many red and blue pens will she get?

Section 2

$$y = 3x - 2$$

If x = 4, what is y?

If y = 19, what is x?

Section 3

Calculate

40% of £64 =

7% of £90 =

Section 4

Calculate:

$\frac{2}{3} + \frac{1}{6} =$

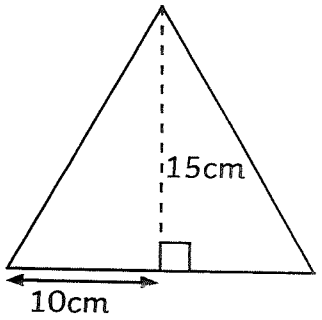
$\frac{3}{10} - \frac{4}{15} =$

Section 5

There are 42 people in a cinema. Coffee costs £2.40 and tea £1.50. The takings are £81, of which £33 was taken on tea. How many people drink coffee?

Section 6

Calculate the area of this triangle.



Section 7

Write the name of a regular shape with internal angles of 60°.

Section 8

Ishfaq has some pencils. 13 are freshly sharpened, six need sharpening and seven are brand new. Express the total number of pencils algebraically, using p to represent the total number of pencils.

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:

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

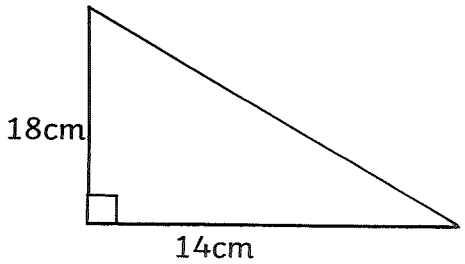
$\frac{3}{4} - \frac{3}{20} =$

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 2 Maths Activity Mat

1

Bags of mini chocolate eggs contain six milk chocolate eggs, five plain chocolate eggs and three white chocolate eggs. Jake would like 15 plain chocolate eggs. How many milk and white chocolate eggs will he have?

_____

2

$y = 3x + 7$

If $x = 4$, what is y? _____

If $y = 31$, what is x? _____

3

Calculate:

15% of £46 =

80% of £125 =

4

Calculate:

$\frac{1}{4} + \frac{5}{8} =$ $\frac{9}{10} - \frac{3}{5} =$

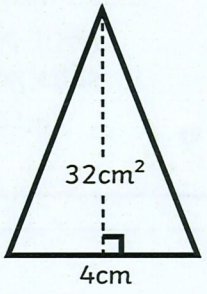
5

For Comic Relief, a school have two activities. Children paid £1.50 to not wear uniform. There was also a bake sale that raised £56.25 out of the total £423.75. How many children did not wear school uniform?

_____

6

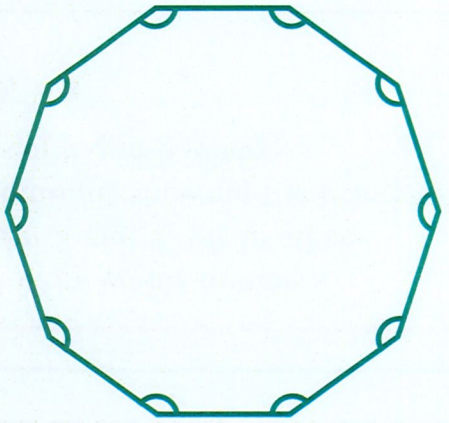
This triangle has an area of $32cm^2$. Calculate the height of the triangle.



Height: _____

7

Calculate the angles in this regular decagon:



_____

8

Express the answer to this word problem algebraically, using h to represent the number hours Miles is asleep in a day, when he spends seven hours at school and is awake for another nine hours.

_____

_____

Year 6 Spring 2 Maths Activity Mat

1

Use these clues to find the number:

- The number has six digits.
- The number is less than 300 000.
- Nine is a factor of the number.
- Three digits are even and three are odd.
- The second digit is the first digit cubed.
- The tens digit has no value.
- The thousands digit is seven times the hundreds digit.

_____

2

Calculate:

$$\begin{array}{r} 6\ 7\ 1\ 9 \\ \times\quad 3\ 4 \\ \hline \end{array}$$

_____

_____

3

Write 1.625 as an improper fraction?

_____

4

A shop sells four sizes of Easter eggs. Altogether it sells 5982 eggs, of which 1697 are small and 1049 are medium size. The remaining eggs are large and extra large. 25% of the remaining eggs sold are extra large. How many extra large eggs are sold?

_____

5

Complete:

$\frac{3}{4} \div 4 =$ $\frac{2}{5} \div 4 =$

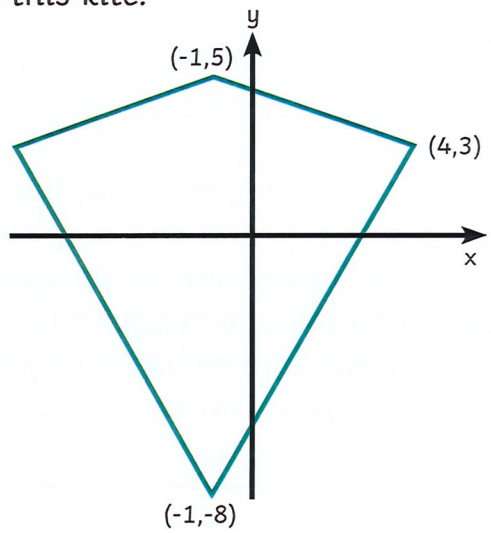
6

Alice makes a drink for a party of 16 children. She uses four litres of lemonade and three litres of juice. How much drink would each child have if the drink was shared equally?

_____

7

Write the missing coordinates for this kite.



_____

8

a and b are whole numbers between 5 and 9. Write all the combinations showing the possible values of a and b where:

$2a - b = 8$

_____

_____

Year 6 Spring 2 Maths Activity Mat

1

The temperature in a fridge should be between 1°C and 4°C, and in a freezer between -18°C and -20°C. What should be the maximum and minimum differences in temperatures between a fridge and freezer? _____

2

Calculate in your head:

263 + 306 =

253 + 147 =

703 – 401 =

612 – 593 =

3

Calculate:

7 × (3 + 6) =

98 - 12 × 8 =

(45 + 19) ÷ 8 =

4

Circle the odd one out.

$\frac{3}{4}$ 0.75 $\frac{7}{8}$ $\frac{9}{12}$ $\frac{12}{16}$

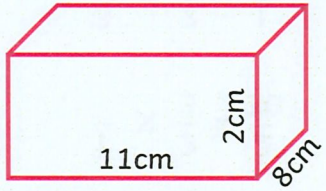
5

The moon is an average of 238 855 miles from the Earth. Round the distance to an appropriate figure.

The average distance from the earth to the moon is _____, rounded to the nearest _____.

6

Calculate the volume of this cuboid.



Volume = _____

7

Describe the radius and the diameter of a circle.

8

Find the mean of these numbers:

46, 38, 29, 40, 61

_____

Year 6 Spring 2 Maths Activity Mat

1

Round the following numbers to the nearest ten million.

23 891 500 →

85 000 000 →

44 500 000 →

2

Use this Carroll diagram to write the common factors of 8 and 18.

	Factor of 8	Not a factor of 8
Factor of 18		
Not a factor of 18		

3

What number, when halved, is three times 16?

_____

4

Calculate:

$\frac{1}{3} \times \frac{1}{_} = \frac{1}{12}$

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

$\frac{3}{4} \times \frac{2}{3} = \frac{1}{2}$

5

Calculate, writing the answer as a decimal:

$8\overline{)510}$

6

Write possible measurements for the sides of this rectangle.

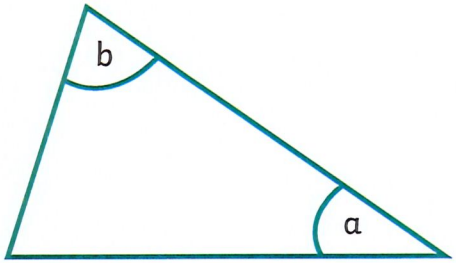
Area = 24cm²

Perimeter = 22cm

_____

7

Estimate angles a and b.



_____

8

Find three pairs of numbers that satisfy these equations:

2a - b = 5

_____

_____

_____

c + 4d = 15

_____

_____

_____

Year 6 Spring 2 Maths Activity Mat

1

What is the value of the digit in the hundred thousands place in the number 7 802 314?

_____

2

A farmer has 24 092 animals. There are 13 562 sheep and 2893 sheep. The rest are pigs. How many pigs does the farmer have?

_____

_____

3

Calculate:

$14 \overline{)7238}$

4

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

$\frac{13}{4}$ $\frac{7}{2}$

$\frac{19}{8}$ $\frac{5}{2}$

$\frac{23}{6}$ $\frac{11}{3}$

5

Calculate:

0.04 x 6 =

0.03 x 9 =

0.07 x 8 =

6

1 mile ≈ 1600m

How many miles is a 10 000m race?

_____

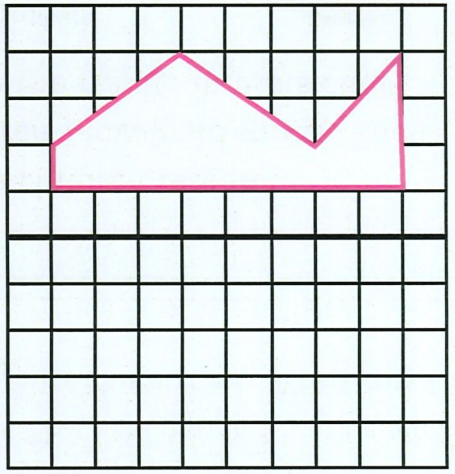
7

Name this shape.

_____

8

Reflect this shape about the thick black vertical line.



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Year 6 Spring 2 Maths Activity Mat

1

Order the following numbers from smallest to largest:

776 776, 767 767, 767 677, 776 677

2

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

☐ 785 × 8 ≈ 7000

☐ 65 712 - 34 989 ≈ 20 000

☐ 653 ÷ 13 ≈ 50

Explain why any estimates are unreasonable._____

_____

3

A teacher organises 354 children into groups of eight children. How many groups of eight children will there be?

_____

4

Simplify the following fractions.

$\frac{6}{15}$ $\frac{24}{32}$

5

Calculate:

0.1 x 100 =

0.8 x 100 =

0.4 x 100 =

6

Convert the following:

0.3l =_____ml

_____ l = 5800 ml

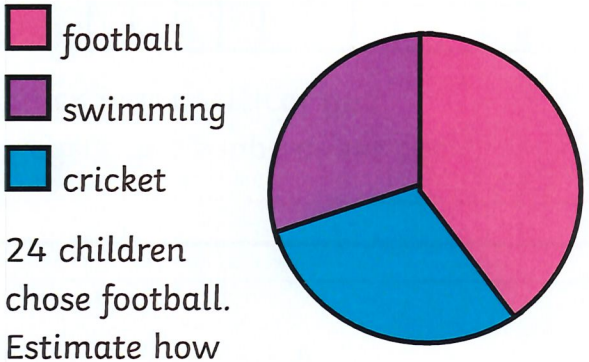
7

I have two flat faces that are circles, which are parallel to each other. The other face is a curved face that joins the circles. What am I?

_____

8

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



24 children chose football. Estimate how many children chose cricket?

_____

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.

$\frac{15}{27}$ $\frac{45}{75}$

5

Calculate:

0.7 x 110 =

0.4 x 1001 =

0.9 x 1010 =

6

Convert the following:

8ml = _____ l

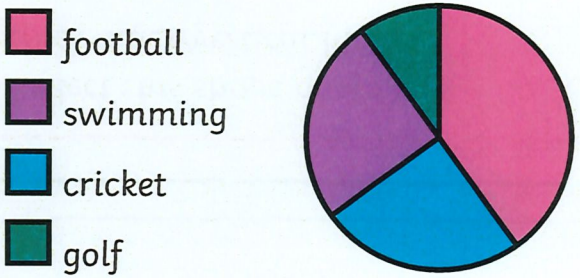
_____ cl = 0.093l

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:

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

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 =

0.9 x 0.06 =

0.07 x 0.04 =

6

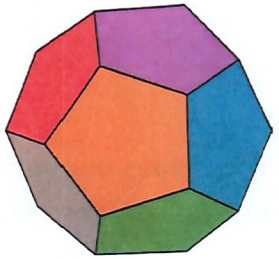
1 mile ≈ 1600m

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

_____

7

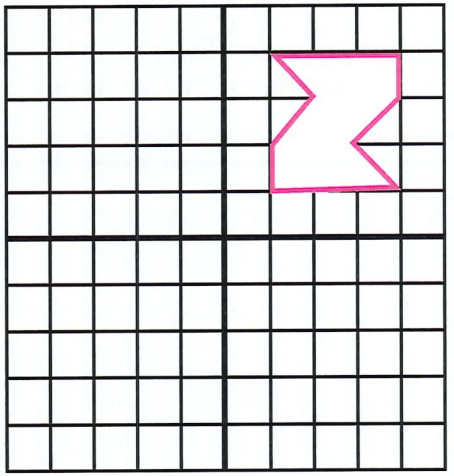
Name this shape.



_____

8

Reflect this shape about the thick black vertical line.



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:

$\frac{1}{4} \times \frac{2}{_} = \frac{1}{6}$ $\quad\quad$ $\frac{3}{_} \times \frac{2}{3} = \frac{1}{5}$

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

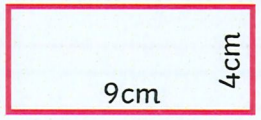
5

Calculate, writing the answer as a decimal:

$16\overline{)1066}$

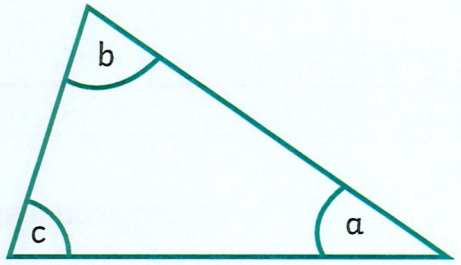
6

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?

_____

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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:

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

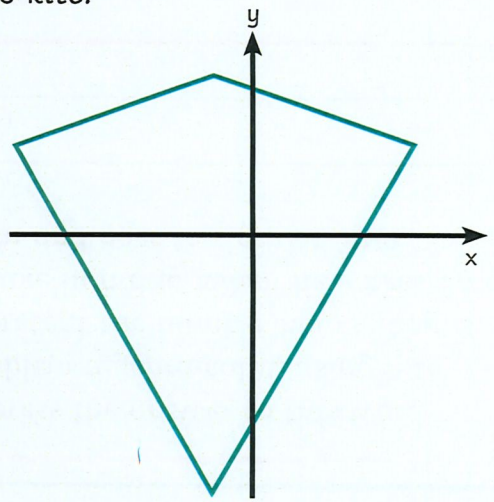
6

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?

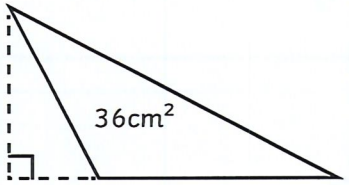
_____

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?

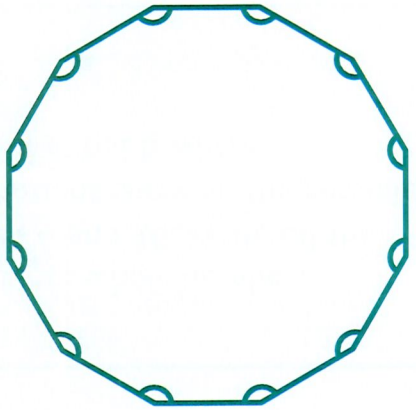
_____

_____



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.

_____

_____

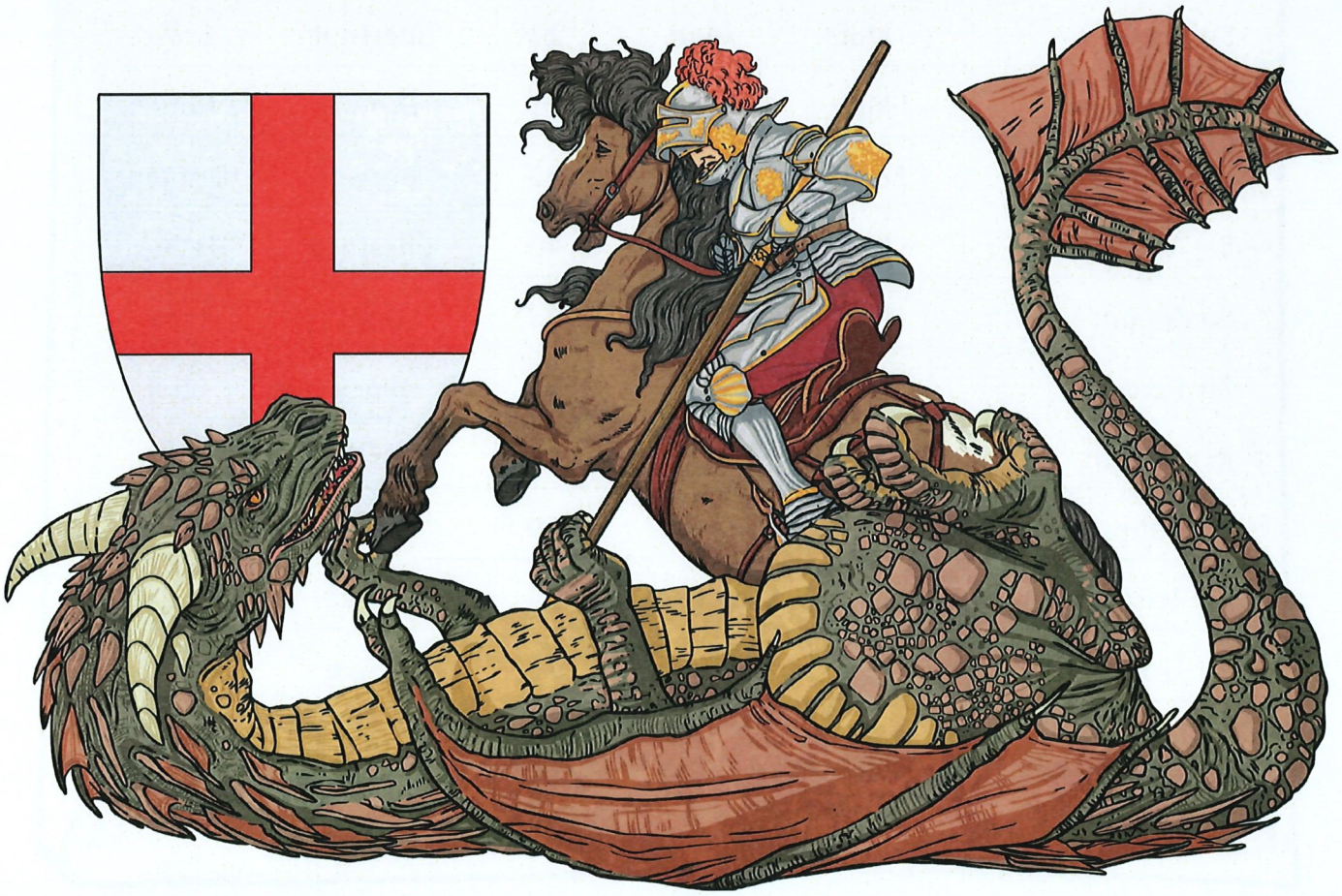
The Mystery of the Missing Knight St. George's Day

Maths Mystery Game

After his brave battle against the dragon, Saint George was invited by the king to join him at a celebratory banquet.

Unfortunately, on his way to the banquet, Saint George became lost and could not find his way to the hall. When the guests realised that the guest of honour was missing, they set about trying to find him.

Solve the problems and find which guest discovered the whereabouts of missing Saint George.



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Guest	Gender	Cloak Colour	Age	Horse Colour	Emblem
Sir Accolon	Male	Red	45	Black	Dragon
Dame Brisen	Female	Blue	32	Black	Horse
Lady Catherine	Female	Red	48	Chestnut	Lion
Sir Dagonet	Male	Blue	25	Grey	Cross
Sir Ector	Male	Yellow	47	Brown	Cross
Lady la Fay	Female	Yellow	42	Grey	Dragon
Queen Guinevere	Female	Blue	24	Brown	Horse
Lady Heliabel	Female	Green	41	Black	Dragon
Lady Igraine	Female	Blue	29	Chestnut	Lion
Sir John Haywood	Male	Green	44	Grey	Lion
Sir Kay	Male	Blue	27	Chestnut	Cross
Sir Lancelot	Male	Green	33	Brown	Horse
Lady Matilda	Female	Yellow	22	Brown	Dragon
Sir Nicholas	Male	Red	40	Chestnut	Horse
Sir Owain	Male	Blue	23	Grey	Lion
Sir Percival	Male	Yellow	50	Black	Lion
Red Knight	Male	Red	26	Grey	Horse
Sir Safir	Male	Green	49	Black	Lion
Sir Tristram	Male	Yellow	29	Grey	Dragon
Sir Uther Pendragon	Male	Blue	43	Brown	Cross
Lady Viviene	Female	Green	38	Black	Cross
Lady Winifred	Female	Red	28	Chestnut	Horse

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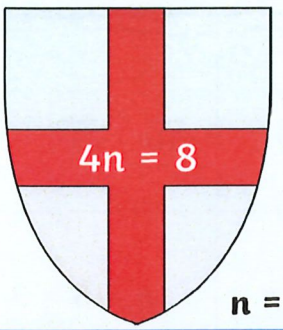
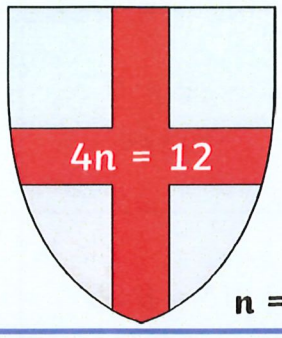
Clue 1: Equations

Find the value of *n* in each equation. A bar model is provided to help you.
The solution that occurs the most will give a clue to who found Saint George.



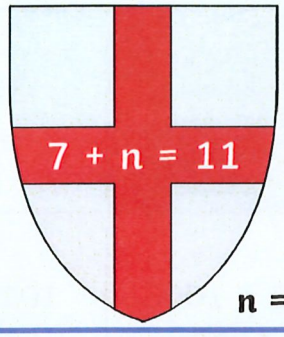
n =

8			
n	n	n	n



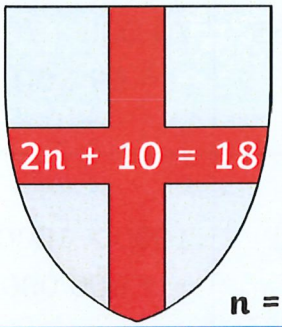
n =

12			
n	n	n	n



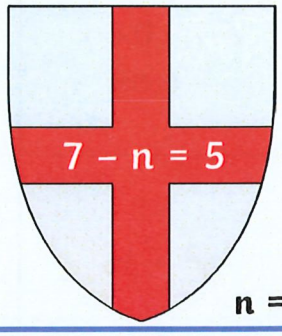
n =

11	
n	7



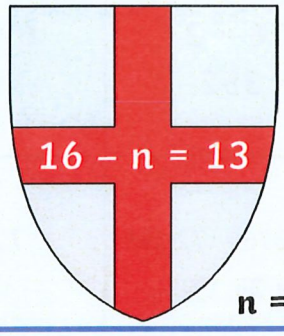
n =

18		
n	n	10



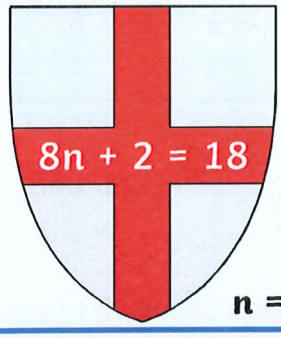
n =

7	
n	5



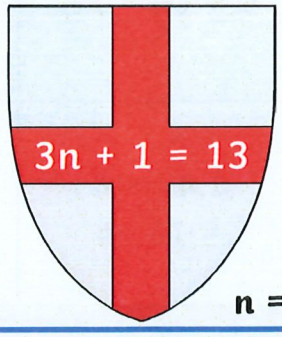
n =

16	
n	13



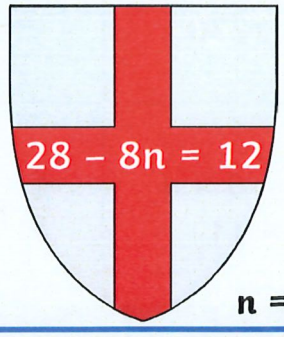
n =

18								
n	n	n	n	n	n	n	n	2



n =

13			
n	n	n	1



n =

28								
n	n	n	n	n	n	n	n	12

2	3	4
The guest doesn't have a green cloak.	The guest doesn't have a blue cloak.	The guest doesn't have a red cloak.

Clue: The guest who found Saint George doesn't have a _____ cloak.

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Clue 2: Arithmetic

Find a path through the maze by colouring in the arithmetic calculations that are correct. The path will reveal a clue about the family emblem of the guest who found Saint George.

START	$306 - 9 = 297$	$32 \times 4 = 128$	$\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$	$\frac{7}{10} - \frac{3}{10} = \frac{3}{10}$
$928 + 100 = 1028$	$1017 + 392 = 1509$	$11 - 8.05 = 3.5$	$84 \div 7 = 13$	$6 \times 5 \times 3 = 75$
$176 \times 2 = 352$	$6.4 + 1.9 = 8.3$	$6.7 - 0.05 = 6.65$	$3408 + 2865 = 6274$	$70\,000 - 700 = 69\,300$
$207\,376 - 72\,198 = 35\,178$	$720 \div 9 = 8$	$6^2 = 36$	$1440 \div 12 = 12$	$1000 \times 1000 = 1\,000\,000$
$6150 \div 5 = 1230$	$11.7 - 3.84 = 7.86$	$5 \times 1\frac{1}{2} = 7\frac{1}{2}$	$47 \times 19 = 1083$	$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$
$47 - 9 \times 4 = 11$	$\frac{1}{5} \times \frac{1}{3} = \frac{1}{8}$	$1.43 \times 8 = 15.44$	$\frac{3}{8} \div 3 = \frac{1}{8}$	20% of $160 = 32$
The emblem of the guest who found Saint George is not a cross or horse.	The emblem of the guest who found Saint George is not a lion or horse.	The emblem of the guest who found Saint George is not a lion or dragon.	The emblem of the guest who found Saint George is not a cross or lion.	The emblem of the guest who found Saint George is not a dragon or horse.

Clue: The family emblem of the guest who found Saint George isn't a _____ or _____.

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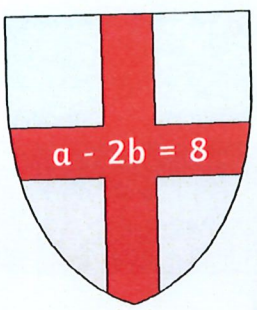
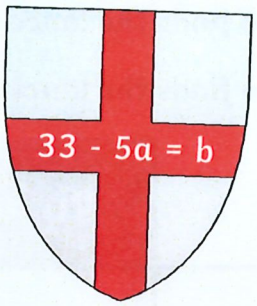
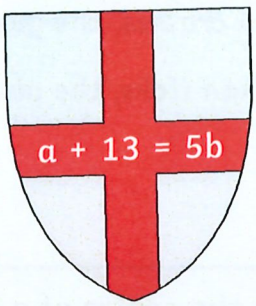
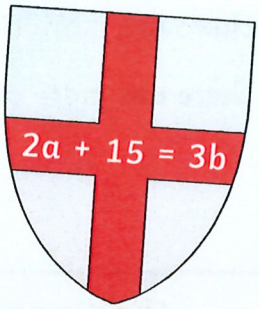
Clue 3: Find Pairs of Values

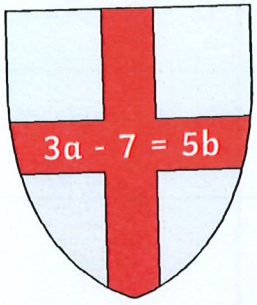
Match the equation with the pair of values that make it correct.
The one remaining answer box will give you a clue about the guest who found Saint George.

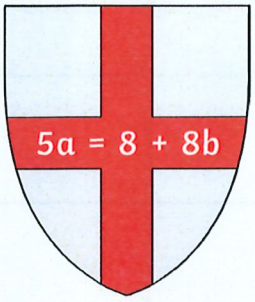


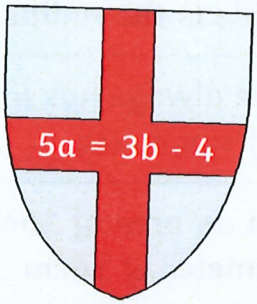


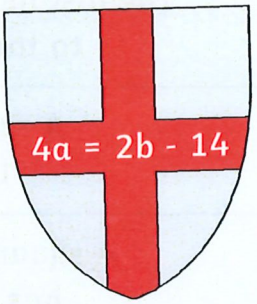












a = 6, b = 9
The guest's horse is brown or black.

a = 12, b = 5
The guest's horse is chestnut or grey.

a = 7, b = 13
The guest's horse is grey or black.

a = 10, b = 1
The guest's horse is chestnut or black.

a = 6, b = 3
The guest's horse is chestnut or brown.

a = 2, b = 11
The guest's horse is grey or brown.

a = 8, b = 4
The guest's horse is black or chestnut.

a = 1, b = 7
The guest's horse is grey or chestnut.

a = 9, b = 4
The guest's horse is black or brown.

Clue: The guest who found Saint George has a _____ or _____ horse.

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Clue 4: Statements about Shape and Measurement

Check if these maths statements are correct. If a statement is correct, put a tick.
If it is incorrect, put a cross. Count the number of ticks and crosses.

If there are more ticks than crosses, the guest who finds the lance is female.

If there are more crosses than ticks, the guest who finds the lance is male.

	Right ✓	Wrong ✗
The distance from the centre of a circle to the outside is the radius.		
A rectangle always has 4 lines of symmetry.		
A square with an area of $16cm^2$ has a perimeter of 16cm.		
If 5 miles is approximately 8km, 15 miles is approximately 20km.		
Two angles in a parallelogram are 70°. The other angles are 110°.		
The distance from one side of a circle through the centre and to the other side is the circumference.		
All right-angled triangles are isosceles triangles.		
If two lines intersect, the adjacent angles must add up to 180°.		
If a triangle has a base of 10cm and height of 6cm, its area is $30cm^2$.		
Total		

Clue: The guest who found Saint George is female/male.

(Circle the correct answer)

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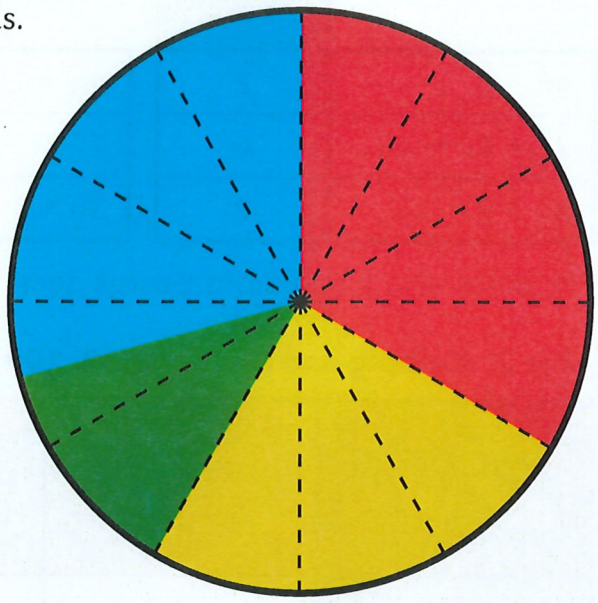
Clue 5: Pie Chart

This pie chart shows the colours of 24 knight's shields.



Circle the correct answer for each question. The column with the most correct answers will tell you the age of the guest who found Saint George.

Yellow Blue Green Red

How many shields are yellow?	4	5	6	7
How many shields are red?	7	8	9	10
What fraction of the shields are green?	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{8}$
What percentage of the shields are yellow?	25%	10%	15%	20%
What fraction of the knights have a yellow or green shield?	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{5}{8}$
	22-28	29-35	36-42	43-50

Clue: The guest who found Saint George is aged _____.

The guest who is responsible for finding Saint George is: _____.

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Clue 1: Equations

	n
4n = 8	2
2n + 10 = 18	4
8n + 2 = 18	2

	n
4n = 12	3
7 – n = 5	2
3n + 1 = 13	4

	n
7 + n = 11	4
16 – n = 13	3
28 – 8n = 12	2

The guest who found Saint George doesn't have a **green** cloak.

Clue 2: Multiply and Divide by 10, 100 and 1000

START	306 – 9 = 297	32 × 4 = 128	$\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$	$\frac{7}{10} - \frac{3}{10} = \frac{3}{10}$
928 + 100 = 1028	1017 + 392 = 1509	11 – 8.05 = 3.5	84 ÷ 7 = 13	6 × 5 × 3 = 75
176 × 2 = 352	6.4 + 1.9 = 8.3	6.7 - 0.05 = 6.65	3408 + 2865 = 6274	70 000 - 700 = 69300
207 376 – 72 198 = 35 178	720 ÷ 9 = 8	$6^2 = 36$	1440 ÷ 12 = 12	1000 × 1000 = 1 000 000
6150 ÷ 5 = 1230	11.7 – 3.84 = 7.86	$5 \times 1\frac{1}{2} = 7\frac{1}{2}$	47 × 19 = 1083	$\frac{2}{3} + \frac{1}{6} = \frac{5}{6}$
47 – 9 × 4 = 11	$\frac{1}{5} \times \frac{1}{3} = \frac{1}{8}$	1.43 × 8 = 15.44	$\frac{3}{8} \div 3 = \frac{1}{8}$	20% of 160 = 32
The emblem of the guest who found Saint George is not a cross or horse.	**The emblem of the guest who found Saint George is not a lion or horse.**	**The emblem of the guest who found Saint George is not a lion or dragon.**	**The emblem of the guest who found Saint George is not a cross or lion.**	**The emblem of the guest who found Saint George is not a dragon or horse.**

The family emblem of the guest who found Saint George isn't a **cross** or **horse**.

Clue 3: Find Pairs of Values

$5a = 3b - 4$	$a = 7, b = 13$	The guest's horse is grey or black.
$33 - 5a = b$	$a = 6, b = 3$	The guest's horse is chestnut or brown.
	$a = 1, b = 7$	The guest's horse is grey or chestnut.
$2a + 15 = 3b$	$a = 6, b = 9$	The guest's horse is brown or black.
$a + 13 = 5b$	$a = 12, b = 5$	The guest's horse is chestnut or grey.
$5a = 8 + 8b$	$a = 8, b = 4$	The guest's horse is black or chestnut.
$4a = 2b - 14$	$a = 2, b = 11$	The guest's horse is grey or brown.
$a - 2b = 8$	$a = 10, b = 1$	The guest's horse is chestnut or black.
$3a - 7 = 5b$	$a = 9, b = 4$	The guest's horse is black or brown.

The guest who found Saint George has a **grey** or **chesnut** horse.

Clue 4: Statements about Shape and Measurement	**Right ✓**	**Wrong ✗**
The distance from the centre of a circle to the outside is the radius.	✓	
A rectangle always has 4 lines of symmetry.		✗
A square with an area of $16cm^2$ has a perimeter of 16cm.	✓	
If 5 miles is approximately 8km, 15 miles is approximately 20km.		✗
Two angles in a parallelogram are 70°. The other angles are 110°.	✓	
The distance from one side of a circle through the centre and to the other side is the circumference.		✗
All right-angled triangles are isosceles triangles.		✗
If two lines intersect, the adjacent angles must add up to 180°.	✓	
If a triangle has a base of 10cm and height of 6cm, its area is $30cm^2$.	✓	
Total	**5**	4

The guest who found Saint George is **female**.

Clue 5: Pie Chart

How many shields are yellow?	4	5	**6**	7
How many shields are red?	7	**8**	9	10
What fraction of the shields are green?	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{8}$
What percentage of the shields are yellow?	**25%**	10%	15%	20%
What fraction of the knights have a yellow or green shield?	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{5}{8}$
	22-28	29-35	**36-42**	43-50

The guest who found Saint George is aged 36 - 42.

The guest who is responsible for finding Saint George is Lady la Fay.

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FRACTIONS

There are 30 children in a class.

$\frac{2}{5}$ of them are girls.

How many boys are in the class?

Product Code: MA08476 - 11 - 18 Made in UK

MEASURES - MONEY

Kerry bought 3 presents. The cheapest present cost £2.80, the most expensive present cost twice as much and the final present was exactly halfway between the prices of the other two presents.

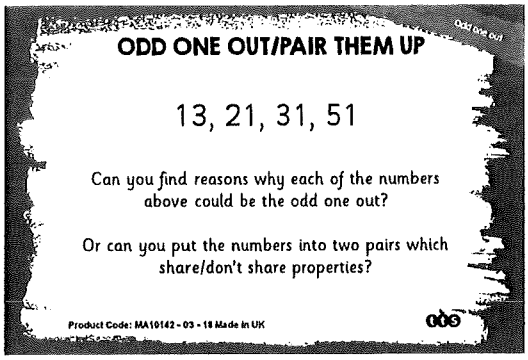
How much did each present cost?

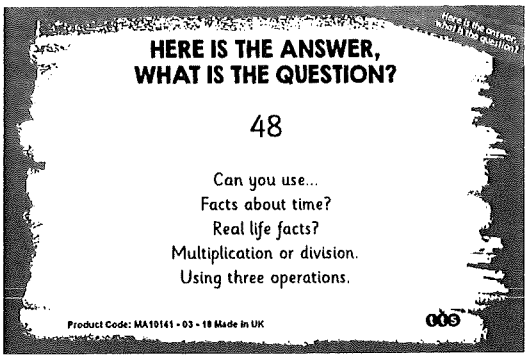
How much did she spend altogether?

Product Code: MA08476 - 11 - 18 Made in UK

Reasoning

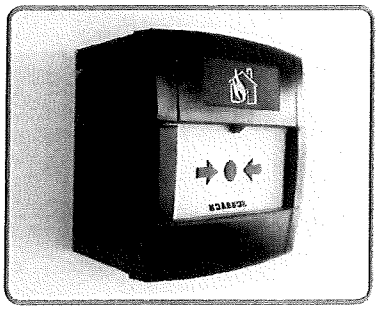
Test your knowledge and combine your mathematical skills to help solve these reasoning problems.

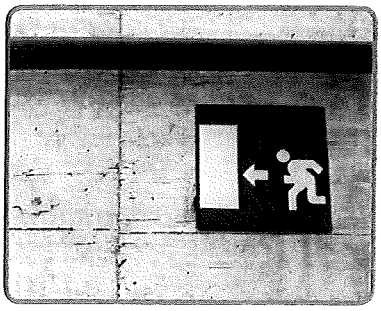




Fire Drills

Fire drills are an essential part of school logistics as they are designed to keep everyone safe in the event of a fire. A drill simply means doing the same thing until it becomes second nature. This is what you do in your school when carrying out a fire drill, so everyone knows what to do should there be a real fire. Sometimes, you will have prior warning about a drill, whereas others times you might not. Nevertheless, at any time there could be a genuine fire and you would need to carry out the drill perfectly to keep everyone safe.



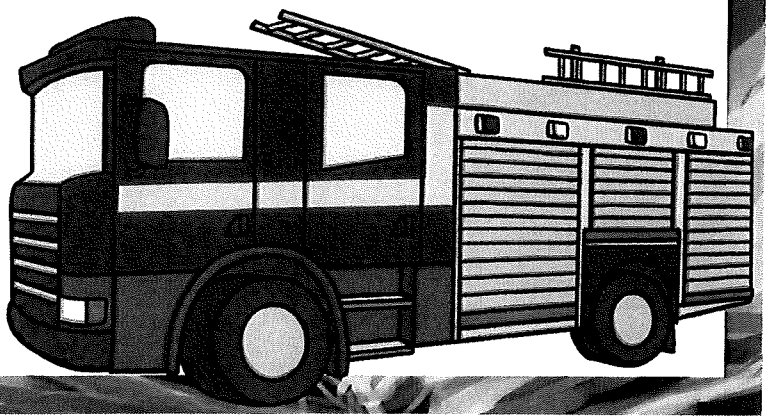


Responding to a Fire Drill

The drill commences with the sound of your fire bell or fire alarm. This will be different from school to school, however, it will be louder and will not sound similar to the bells you are used to. This is to make it crystal clear that it is a fire alarm. In a drill, it will be the premises manager or the headteacher that will usually trigger the alarm. Someone will also start a timer to see how long it takes everyone to get out of the building to safety.

On hearing the alarm, everyone immediately stops what they are doing, stands up, puts chairs back under tables and walks to the nearest exit. Children should not talk so that if teachers need to give instructions, everyone can hear. If you are not in close proximity to your usual exit or your exit is blocked, then you should look for the green emergency exit signs which will direct you to the nearest exit. These signs can be found in all public building, not just schools.

As everyone leaves the building, all the doors will be shut behind them – this is because closed doors stop fires spreading from one room to the next quickly and limits air and oxygen circulating around the building, which would help a fire grow and spread quicker.



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Once everyone is out of the building, the whole school (including all staff) will assemble, lined up in classes, so that teachers can check everyone is present and out of the building. Again, it is really important to keep silent so that any messages or instructions can get through. The teachers will tell the headteacher, or the person in charge of the drill, if their class are all there. If anyone was missing in a real fire, then the fire brigade would need to know that someone was still in the building, so they could be rescued.

Remember!

Fire drills are nothing to be too concerned about; think about them as being prepared. Listening and remembering what to do, however, will help to keep everyone safe!

Things you can do to help yourself and the school:

- If you hear the fire alarm, just go quickly and quietly (but don't run) to the nearest exit and out to the assembly point.
- If you've been sitting on a chair, push it back under the table.
- Listen to what all the adults are saying.
- Know what to do if you find a fire in school.
- Keep an eye out for things that could cause a fire in school.

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Fire Drills **Questions**

1. Why are drills essential in fire safety?

2. How will you know that it's the fire alarm and not your normal school bell?

3. Why do you think doing many drills will help in a real fire situation?

4. Why do you think all public building need to have emergency exit signs?

5. Why do you think you need to put chairs back under tables if you've been sitting on them?

6. Why would shouting or panicking not help others or yourself in a fire drill or real fire situation?

7. In a real fire, when in the sequence of events would the fire brigade be called?

8. In the sixth paragraph, what does the word 'assemble' mean?

9. Name four things you can do to help yourself and others in a fire drill.

10. What reasons might you be separated from your class when the alarm goes and what would you do in this situation?

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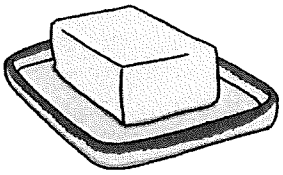
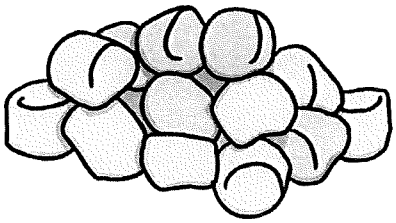
Easter Crispy Cookies Recipe

You Will Need:





3 tbsps butter or margarine
300g regular marshmallows
6 cups rice pops
Icing sugar
Sprinkles
Large roasting tin
Cooking spray
Greaseproof paper
Egg-shaped cookie cutter
Large saucepan
Cooling rack

Method:

1. Melt the butter in a large saucepan.
2. Add the marshmallows and stir until they have all meted.
3. Take the saucepan off the heat and add the rice pops.
4. Stir all the ingredients together until the rice pops are all covered in marshmallows and butter.
5. Prepare the roasting tin by coating it with cooking spray and pour the mixture in.
6. Put the greaseproof paper over the mixture to prevent it from sticking, and roll it out.
7. Using the egg-shaped cookie cutter, cut the mixture into egg shapes. (If the mixture keeps sticking to the cutter, dip it in water).
8. Put the eggs on a cooling rack until they have set.
9. Make up some icing sugar. This will be used to stick the sprinkles onto the egg. (You could also use melted chocolate if you prefer.)
10. Dip one end of the eggs into the icing sugar then into the sprinkles.
11. Leave the eggs to set.

Mini Lava Lamps

This science activity will require a few items from your kitchen and an adult to help. Many thanks to **Sue Martin** for this amazing kitchen science lesson.

For the grown ups

Making 'lava lamps' seems like a difficult proposition for a group of primary school children – but it couldn't be easier! Gather together some readily available materials and they will be up and running in minutes. Now your children are learning about immiscible liquids, chemical reactions, dissolving; and having fun!

What you need

- Large jar or bottle with screw lid
- Cooking oil
- Alka-seltzerTM or effervescent vitamin C tablet
- Food colouring (optional)
- Water

What you do

1. Pour cooking oil into the test tube until it is approximately ¾ full.

2. Top up the tube or beaker with water. Leave about 1cm of space at the top to prevent overflowing. Notice that the water falls to the bottom of the bottle.

3. Break an Alka-seltzer or effervescent vitamin C tablet into around 6-8 small pieces and drop a piece into the test tube. Again, watch as it travels through the oil and into the water at the bottom. The water will begin to fizz and your mini lava lamp erupts into action.

4. As fizzing stops, add further pieces of tablet, until all bubbling ceases.

5. With a lid screwed on you can tip the jar or bottle back and forth, watching waves appear. (Be careful not to screw a lid onto the bottle or jar when the tablet is still active as pressure will build up in the container, either forcing the contents out as you open it or blowing the top off).

What's happening?

Water and oil are immiscible (they don't mix). Water is also denser than oil (i.e. for the same volume of each, water is heavier than oil). So the water sinks below the oil, which floats on top. Alka-seltzer and effervescent Vitamin C tablets contain chemicals that can only react together when they are wet. They are denser than both oil and water, so fall to the bottom of the test tube.

As soon as a piece comes into contact with the water layer, a reaction occurs between the chemicals, producing carbon dioxide (CO_2) gas. These CO_2 bubbles attach themselves to 'blobs' of the water like floats, causing them to rise to the surface, through the oil layer. There, the gas bubbles pop, the water loses its float and sinks back through the oil to the bottom of the test tube.

This process can continue whilst the tablet continues to react and produce CO_2. When the reaction stops, the two layers settle back. If you use Vitamin C tablets, dye (food colouring) is often also present in the tablet. This dissolves in the water layer and produces coloured 'lava'. The children may observe that this occurs over a short period of time rather than immediately. Dissolving is a physical change, which is reversible. The dye is simply dispersed in the water. A few drops of any food colouring may also be added to the bottle if colourless tablets such as Alka-selzer are used and will be observed to dissolve only in the water layer, to create coloured 'lava'.

Once the reaction is over, with a lid on the test tube you can observe the motion of oil and water as you rotate the test tube – the oil layer remains above the water. Even if it is shaken, mixing only occurs

Draw and label how you set up your experiment in the step boxes below:

Step 1

Step 2

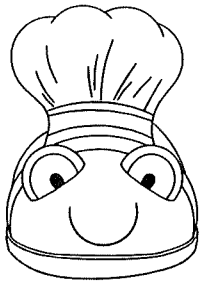
Step 3

Step 4

Results – What happened? What have you learnt from this experiment?

No bake recipes

With the help of an adult have a go at one (or both!) of these delicious no bake recipes at home.



120 g butter
2 cups caster sugar
2 tbs cocoa (sifted)
1/2 cup milk
1/2 cup Nutella (Or any other chocolate spread)
1 tbs vanilla extract
2 1/2 cups rolled oats
2 1/2 cups Rice crispies
sprinkles

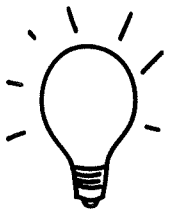
1. Line a backing tray with baking paper and set aside.
2. With an adults help: in a large saucepan melt the butter then add sugar, cocoa and milk. Whisk together and bring to the boil. Boil for one minute. Remove from heat.
3. Add the Nutella, vanilla, rolled oats and rice crispies to the pan and combine well.
4. Pour into slice pan and smooth flat with the back of a metal spoon. Scatter over your choice of sprinkles. (I used coated chocolate chips.)
5. Refrigerate until set. This will take about 3 hours. Cut into squares with a sharp knife.

15 digestive biscuits
15 marshmallows
15 glacé cherries, cut in half
about 200ml condensed milk
100g desiccated coconut, to coat

1. Crush the digestive biscuits in a food processor or in a plastic bag with a rolling pin, then put them in a large mixing bowl.
2. Chop each marshmallow into 4 pieces and add to the bowl with the cherries and 175ml condensed milk. Mix until the ingredients are well combined and you have a sticky mixture. If it's too dry, add a splash more condensed milk.
3. Sprinkle most of the coconut over a large piece of cling film (or foil). Tip the mixture onto the coconut and shape into a long sausage, about 30 x 5cm.
4. Sprinkle more coconut over the top of it and wrap the cling film tightly around, twisting the ends together.
5. Leave in the fridge to chill for 4-6 hrs, then cut into 15 slices and serve. Will keep in the fridge for up to 1 week wrapped in cling film.

Design & Technology Activity 2

In the space below design a packaging for your sweet treat as if it were to be sold in the supermarket. What material would the packaging be made of? In what shape? What would your product be called? Who would your target audience be? Label your packaging with all these details.



Mindfulness

Below are some activities which can be completed at home together to promote mindful practice. Developed by Educational Psychologist, Paula Williams to help children understand their bodies reaction to feelings and how to manage them.

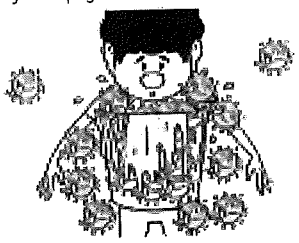
It is recommended that these activities are completed in a calm environment away from distractions. This is a perfect opportunity to bond with your child whist building coping strategies for anxiety and stress.

The coach cards are for the adult and the child cards are for the children.

Child

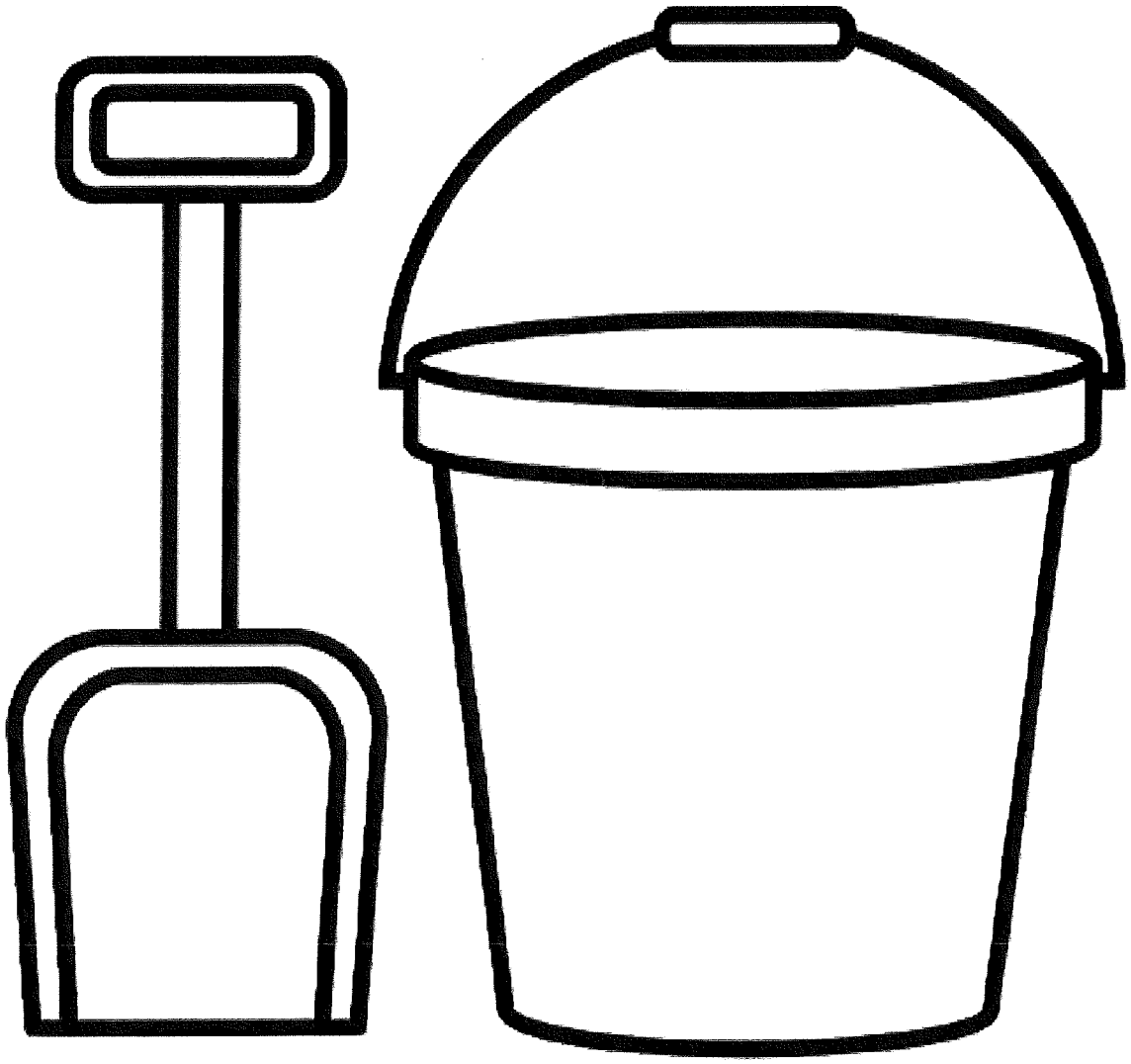
Bucket analogy – Part 1

- Imagine your body is a bucket.
- When we get anxious or upset our stress hormones pour in and can spill over.
- If this happens we might cry or get angry.
- We need to think of the things that start to make us feel upset much earlier.
- Little things might add up or a few bigger things might fill your bucket.
- Think of worries that upset you, draw them in your bucket as water levels or pebbles. What fills up your bucket/body?



Child

Bucket analogy – Part 2

- Look at your bucket and the things that worry you.
- Your Calming Cat coach will help you to think about different activities which might help you to let go of some of those tensions.
- Let it go
- Let it go

Mindfulness & Wellbeing Activity 1