Place Value Mystery Number **Answers**

Use these clues to help you calculate the missing number.

<table>
<tr>
<td>The mystery number (x) has been ordered with these numbers.
<table>
<tr><td>9 723 654</td><td>9 852 000</td><td>x</td><td>10 000 000</td></tr>
<tr><td colspan="2">Smallest</td><td colspan="2">Greatest</td></tr>
</table>
</td>
<td>If you count back from the mystery number in millions, you will arrive at an odd number less than 10 000 000 but greater than 9 999 900.</td>
</tr>
<tr>
<td>The value of the tens digit in the mystery number is 0.</td>
<td>The digit sum of the mystery number is 54.</td>
</tr>
</table>

The mystery number is **9 999 909**.

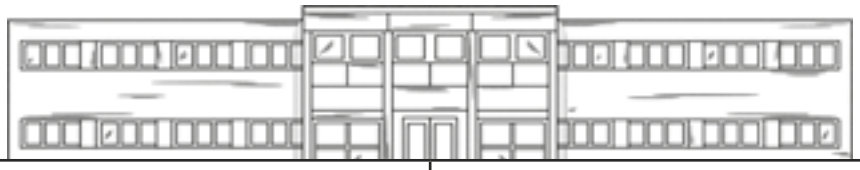
Think of your own mystery number. Write clues which lead to calculating your mystery number.

Calculation Course **Answers**

Viren and Mae leave their homes and walk to their new secondary school. They start by thinking of a number and at each step, they perform a calculation on it. What number will they have when they reach their new school?

Mae's number is 2^3.	**8**
Multiply by the third prime number.	**$8 \times 5 = 40$**
Subtract the largest factor of 22, then divide by 6.	**$40 - 22 = 18$** **$18 \div 6 = 3$**
Square this number then find the fifth multiple of the result.	**$3^2 = 9$** **Fifth multiple of 9 = 45**

Viren's number is the only even prime number.	**2**
Multiply by 12.	**$2 \times 12 = 24$**
Add 1, then square root.	**$\sqrt{25} = 5$**
Add 3, then find the 3rd multiple.	**24**
Subtract the 6th prime number.	**$24 - 13 = 11$**
Add 1, then divide by 4.	**$12 \div 4 = 3$**
Cube, then subtract 12.	**$3^3 = 27$** **$27 - 12 = 15$**



Divide Mae's number by Viren's number.	**$45 \div 15 = 3$**

Fraction Flags **Answers**

Colour each flag, using the given fractions. State the remainder as a fraction in its simplest form.

$\frac{3}{8} + \frac{1}{4}$ = green

$\frac{7}{8} - \frac{12}{16}$ = yellow

The rest will be blue.

green = $\frac{5}{8}$

yellow = $\frac{1}{8}$

blue = $\frac{2}{8} = \frac{1}{4}$

G	G	G	G
G	Y	B	B

$\frac{3}{2} - \frac{3}{4}$ = red

$1\frac{1}{2} - 1\frac{3}{8}$ = yellow

The rest will be white.

red = $\frac{3}{4}$

yellow = $\frac{1}{8}$

white = $\frac{1}{8}$

R	R	R	R
R	R	Y	W

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

$\frac{8}{10} \times \frac{1}{2}$ = yellow

The rest will be blue.

red = $\frac{3}{10}$

yellow = $\frac{8}{20}$ or $\frac{4}{10}$ or $\frac{2}{5}$

blue = $\frac{3}{10}$

R	R	R	Y	Y
Y	Y	B	B	B

$\frac{2}{3} \div 2$ = green

$\frac{3}{4} \div 3$ = red

The rest will be yellow.

green = $\frac{2}{6}$ or $\frac{1}{3}$ or $\frac{4}{12}$

red = $\frac{3}{12}$ or $\frac{1}{4}$

yellow = $\frac{5}{12}$

G	G	G	G	R	R
R	Y	Y	Y	Y	Y

$\frac{4}{5} \div 6$ = blue

$\frac{7}{10} \times \frac{2}{3}$ = yellow

The rest will be green.

blue = $\frac{4}{30}$ or $\frac{2}{15}$

yellow = $\frac{14}{30}$ or $\frac{7}{15}$

green = $\frac{6}{15} = \frac{2}{5}$

B	B	Y	Y	Y
Y	Y	Y	Y	G
G	G	G	G	G

1st fraction in order = yellow

3rd fraction in order = green

The rest will be red.

yellow = $\frac{1}{4}$ or $\frac{3}{12}$

green = $\frac{5}{12}$

red = $\frac{4}{12}$ or $\frac{1}{3}$

Y	Y	Y	G	G	G
G	G	R	R	R	R

Order the fractions from smallest to biggest:

$\frac{5}{12}, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{7}{6}$

$\frac{1}{4}, \frac{1}{3}, \frac{5}{12}, \frac{1}{2}, \frac{7}{6}$

Geometry and Measure Game **Answers**

Question Number	Question	Answer
1	The area of a square with length 5cm.	**25cm^2**
2	The approximate number of kilometres in 5 miles.	**8km**
3	The number of millimetres in 5 centimetres.	**50**
4	The name of an angle less than 90°.	**Acute**
5	The number of millilitres in 3 litres.	**3000ml**
6	The volume of a cube with length 5m.	**125m^3**
7	The perimeter of a square with an area of 4cm^2.	**8cm**
8	Two angles are on a straight line. One is 50°. What is the other one?	**130°**
9	The area of a triangle with a base of 6cm and a height of 8cm.	**24cm^2**
10	The name of a ten-sided polygon.	**Decagon**
11	The approximate number of kilometres in 15 miles.	**24km**
12	The value of an angle in an equilateral triangle.	**60°**
13	A circle has a radius 6cm long. Calculate the length of its diameter.	**12cm**
14	The name of an angle greater than 90° but less than 180°.	**Obtuse**
15	The number of centimetres in 2 metres.	**200cm**
16	The number of kilograms in 2750 grams	**2.75kg**
17	The number of millilitres in 5.4 litres.	**5400ml**
18	The number of centimetres in 65 millimetres.	**6.5cm**
19	The name of a six-sided polygon.	**Hexagon**
20	The approximate number of miles in 16 kilometres.	**10 miles**
21	The name of the line passing through the centre a circle from side to side.	**Diameter**
22	The name of a five-sided polygon.	**Pentagon**
23	The number of seconds in 1 hour	**3600**
24	The area of a parallelogram with a base of 10cm and a vertical height of 5cm.	**50cm^2**
25	The name of the edge of a circle.	**Circumference**
26	The number of grams in 4 kilograms	**4000g**
27	The number of seconds in 5 minutes.	**300**
28	The name of an angle equal to 90°.	**Right angle**
29	The number of hours in 300 minutes.	**5**
30	The number of litres in 2500 millilitres.	**2.5l**
31	The number of metres in 3.25 kilometres.	**3250m**
32	Two angles are on a straight line. One is 135°. What is the other one?	**45°**
33	The number of sides in a hexagon.	**Six**
34	The name of an angle greater than 180° but less than 360°.	**Reflex**
35	The name for any four-sided polygon.	**Quadrilateral**
36	The name of the line from the centre of a circle to its edge.	**Radius**