Maths Transition

Goodbye, Year 6

Hello, Year 7

Name _____

BEYOND MATHS

Place Value Mystery Number

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 1 000 000 but greater than 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 _____.

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

Red

Amber

Green

How did you find this challenge? Circle your choice. Green = good, amber = okay, red = difficult.

Calculation Course

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.	
Multiply by the third prime number.	
Subtract the largest factor of 22, then divide by 6.	
Square this number then find the fifth multiple of the result.	

Viren's number is the only even prime number.	
Multiply by 12.	
Add 1, then square root.	
Add 3, then find the 3rd multiple.	
Subtract the 6th prime number.	
Add 1, then divide by 4.	
Cube, then subtract 12.	

Divide Mae's number by Viren's number.	

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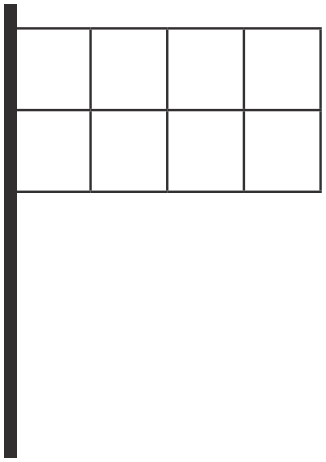
Fraction Flags

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

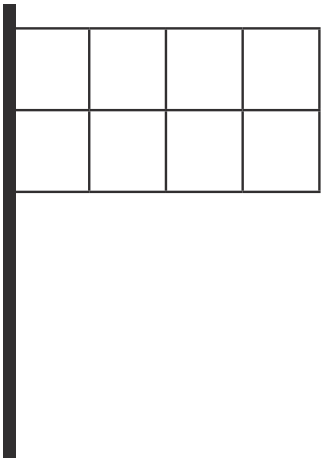
The rest will be blue.



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

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

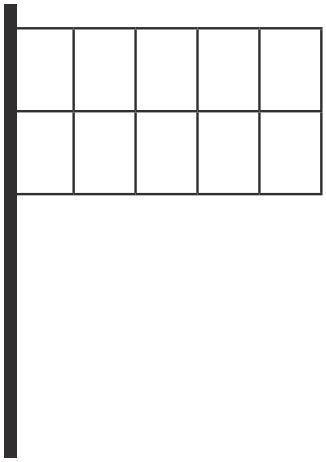
The rest will be white.



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

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

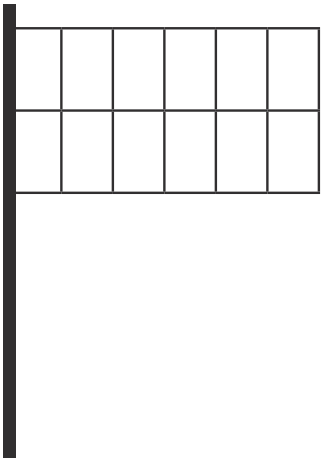
The rest will be blue.



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

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

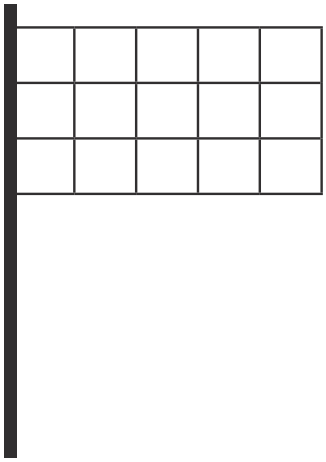
The rest will be yellow.



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

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

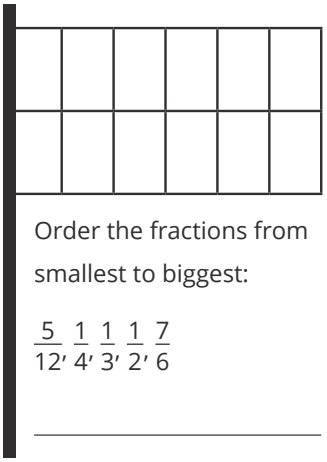
The rest will be green.



1st fraction in order = yellow

3rd fraction in order = green

The rest will be red.



Order the fractions from smallest to biggest:

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

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Decimal Game

A game for two players (or more players can work in teams).

Each player will need:

0 - 9 digit cards.

Instructions:

Shuffle your set of cards and place them face down.

Player one turns over two cards.

The first card represents the value in the unit (or ones) column. The second card represents the value in the tenths column.

For example, player one turns over 9 and 5. These represent 9 and 0.5

Multiply the two numbers together.

For example $9 \times 0.5 = 4.5$

The answer is that players score.

Player two then takes their turn.

Add up the scores as you go.

The first player to reach 100 or more is the winner.

Want to try something more challenging?

Make the second card to represent a hundredth.

For example a 9 and a 5 represents $9 \times 0.05 = 0.45$

The first player to reach 10 or more is the winner.

Red

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Geometry and Measure Game

A game for two players (or more players can work in teams).

You will need:

A pair of dice

Two piles of different coloured counters (at least 20 of each).

Instructions:

Each player choose a colour.

Player one will roll two dice and add the numbers. Find a corresponding square (some numbers will have more than one possible square to choose from).

Answer the question. You only have one attempt.

Player two will then check player one's answer.

If the answer is correct, player one can 'claim' that square.

Player two then has their turn.

The winner is the first person to claim four squares in a row, horizontally, diagonally or vertically.

	1	2	3	4	5	6
	7	8	9	10	11	12
	13	14	15	16	17	18
	19	20	21	22	23	24
	25	26	27	28	29	30
	31	32	33	34	35	36
						

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Geometry and Measure Game

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

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Amber

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0 BEYOND	1 BEYOND	2 BEYOND	3 BEYOND	4 BEYOND
5 BEYOND	6 BEYOND	7 BEYOND	8 BEYOND	9 BEYOND

4 BEYOND	9 BEYOND
3 BEYOND	8 BEYOND
2 BEYOND	7 BEYOND
1 BEYOND	6 BEYOND
0 BEYOND	5 BEYOND


BEYOND
MATHS