Stanground Academy

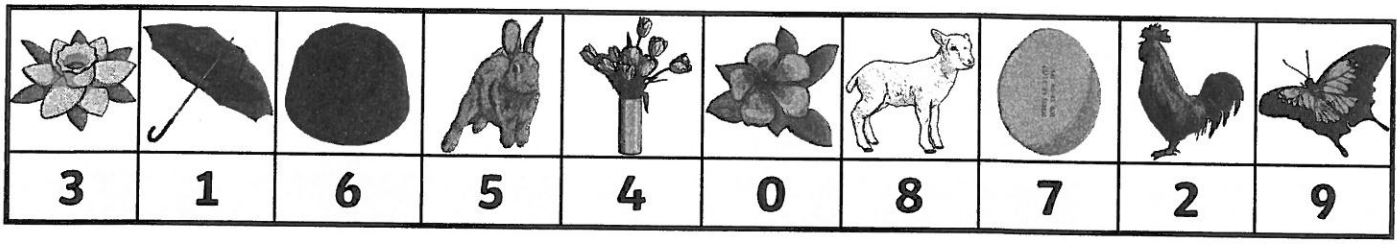
Mathematics Department

Year 7 Homework Booklet

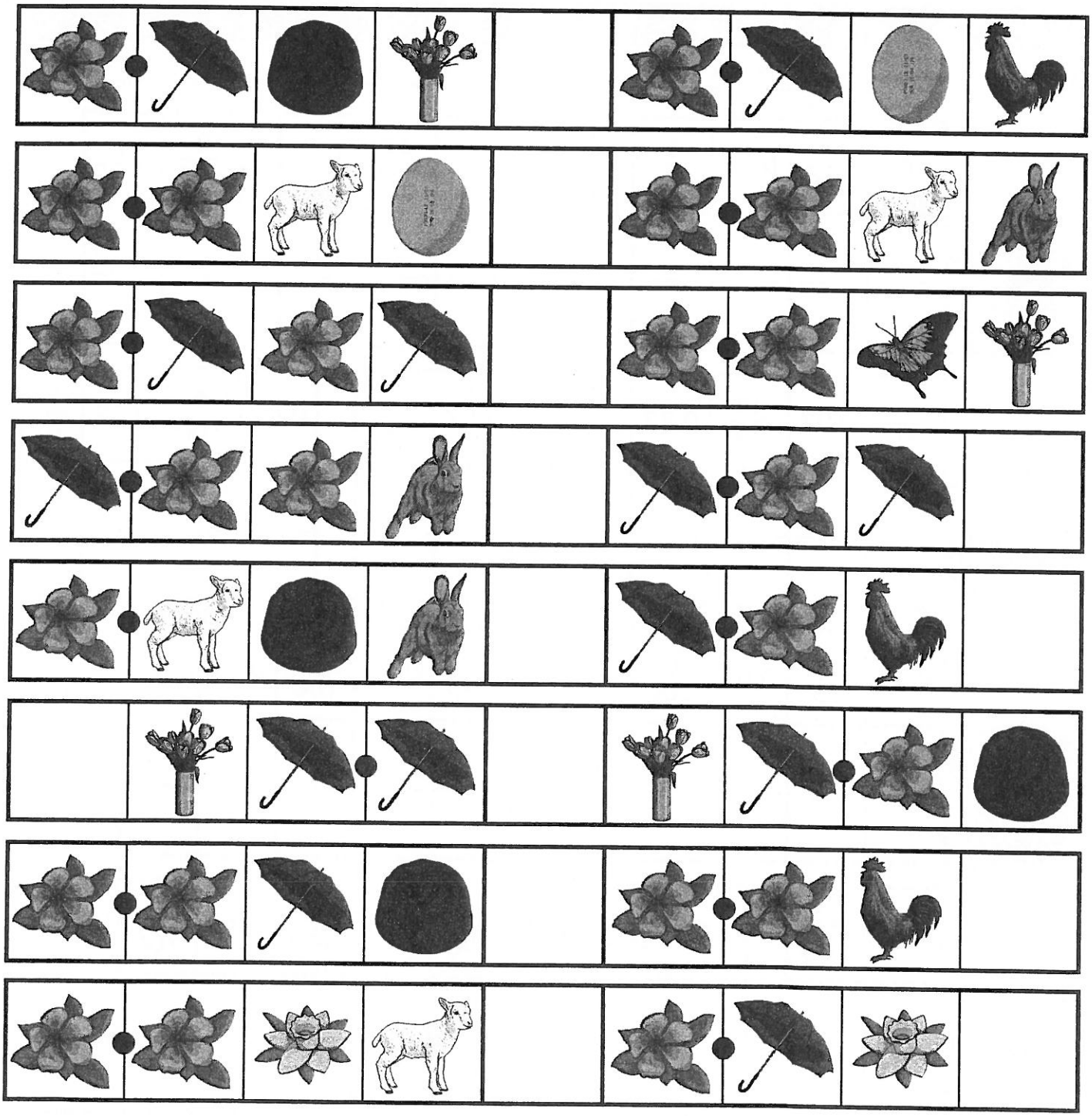
Student's Name:.....

Teacher:.....

Compare Code Breaker



Use the code breaker to compare these decimal fractions.



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Calculations Code Breaker

Reveal a spring-themed joke by writing the percentage equivalent to the following fractions and decimal fractions. Use the grid to locate the letter that matches each answer. The joke will read across the tables.

A	B	C	D	E	F	G	H	I	J	K	L	M
6%	15%	21%	5%	13%	24%	18%	7%	12%	1%	25%	19%	9%

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
22%	16%	11%	26%	2%	17%	20%	3%	10%	8%	14%	23%	4%

	0.08	$\frac{7}{100}$	0.06	$\frac{1}{5}$
Answer				
Letter				

	$\frac{18}{100}$	0.16	$\frac{13}{100}$	0.17

	$\frac{3}{100}$	0.11

	$\frac{2}{25}$	0.07	$\frac{13}{100}$	0.22
Answer				
Letter				

	$\frac{2}{10}$	0.07	$\frac{13}{100}$

	0.02	$\frac{6}{100}$	0.12	$\frac{22}{100}$

	0.21	$\frac{4}{25}$	0.09	$\frac{13}{100}$	0.17
Answer					
Letter					

	$\frac{5}{100}$	0.16	$\frac{8}{100}$	0.22
				?

	0.06	$\frac{22}{100}$
Answer		
Letter		

0.03	$\frac{9}{100}$	0.15	$\frac{2}{100}$	0.13	$\frac{19}{100}$	0.19	$\frac{6}{100}$
							.

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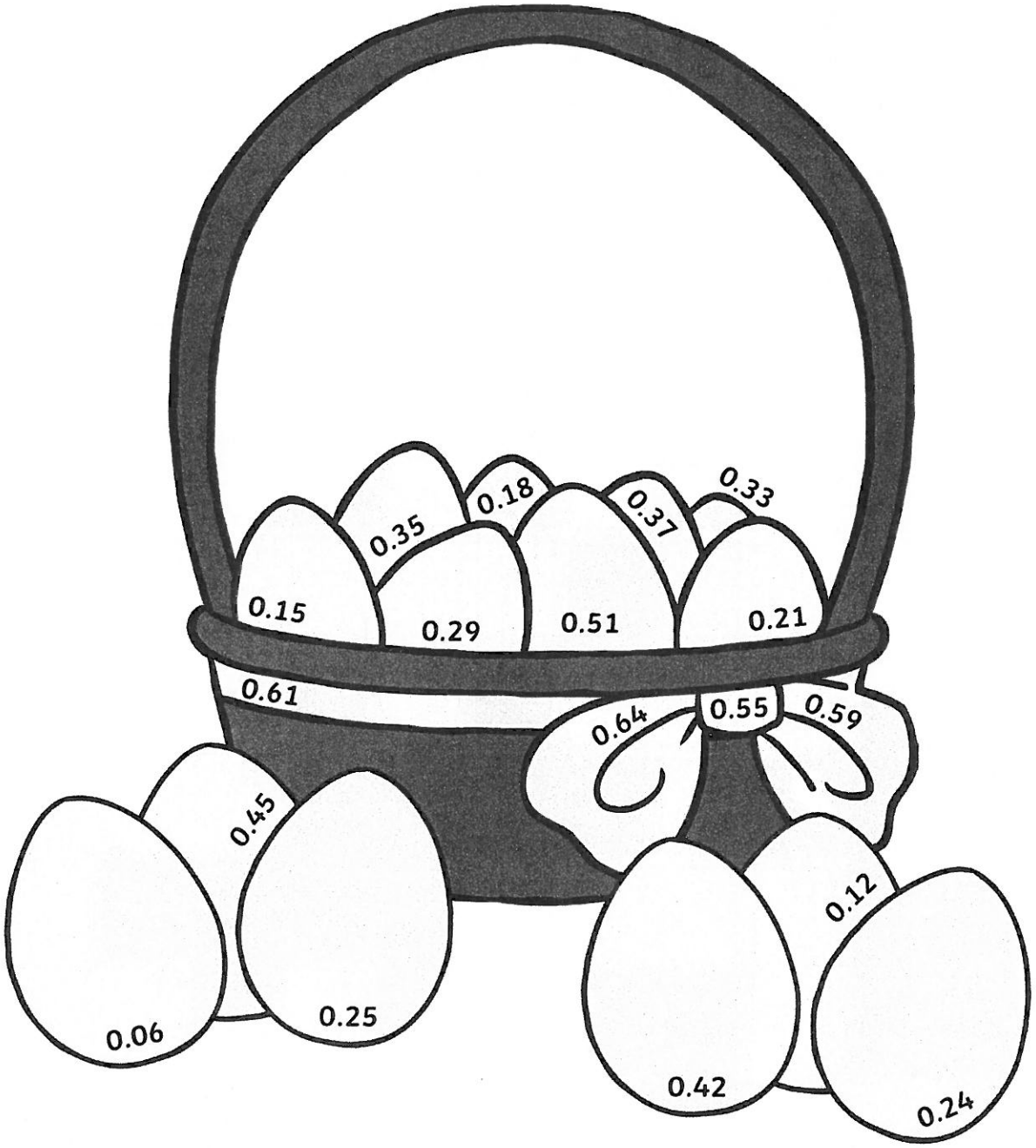
Colour by Calculation

Round each number to the nearest tenth. Use the key to colour the spring-themed picture.



Pink:	Orange:	Yellow:	Green:	Light Purple:	Blue:
0.6	0.1	0.2	0.3	0.4	0.5

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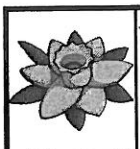
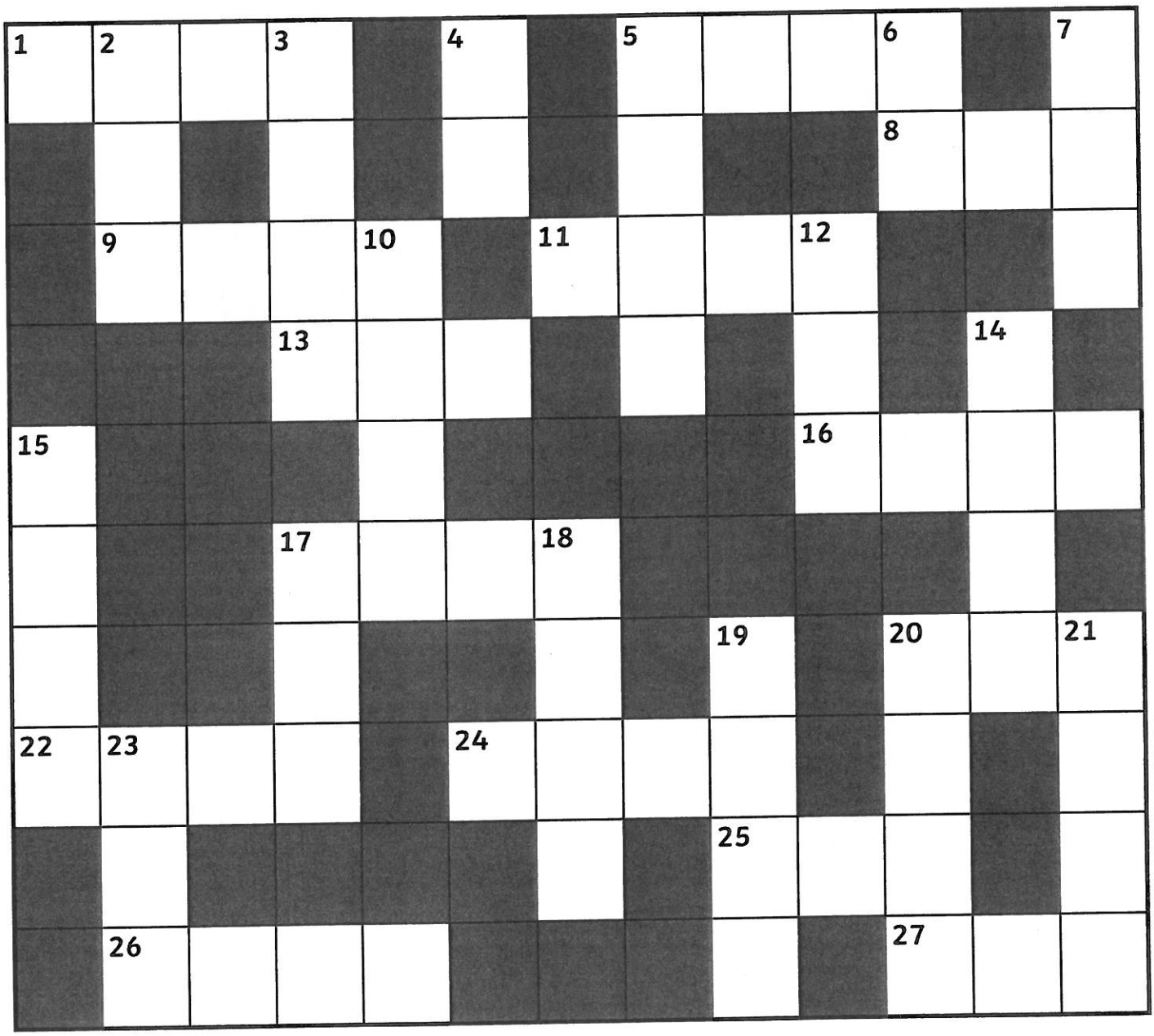
Number Cross

									
3	1	6	5	4	0	8	7	2	9

Use the spring-themed code breaker to discover the clues to the number cross. Use written methods of multiplication to solve the number cross.



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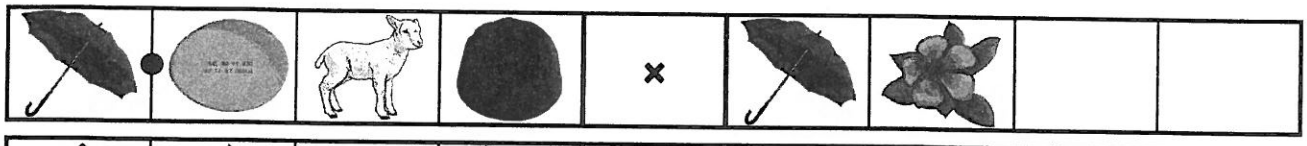
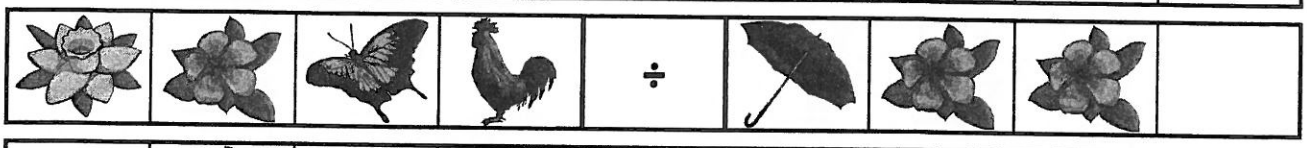
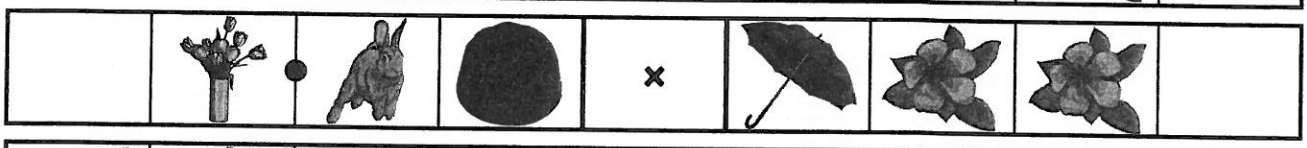
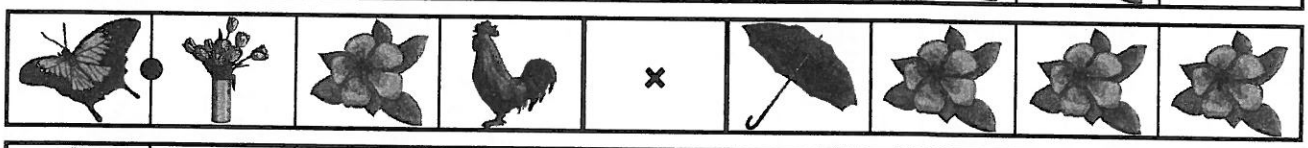
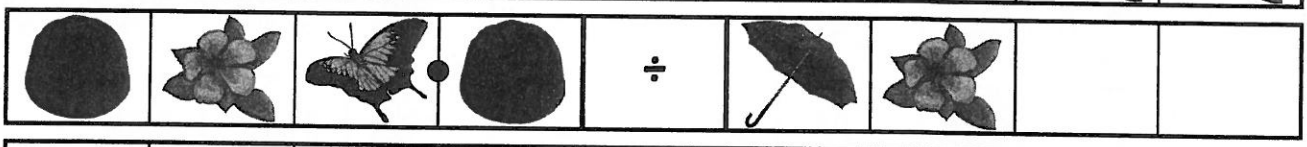
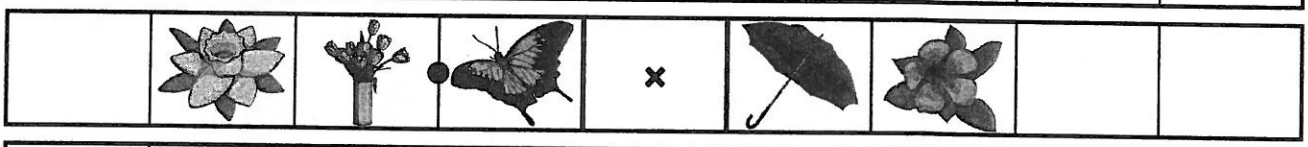
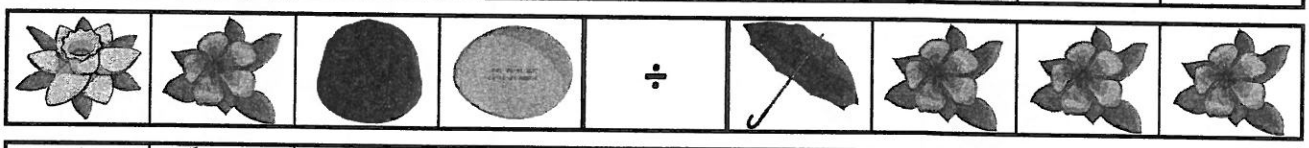
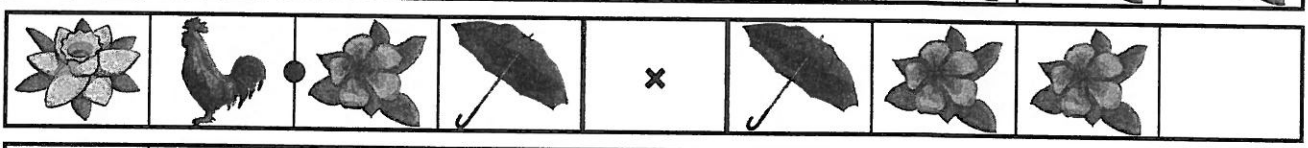
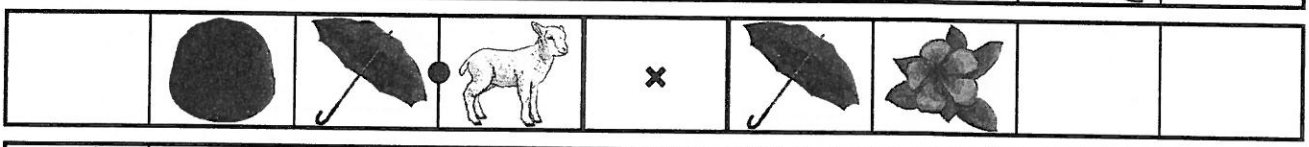
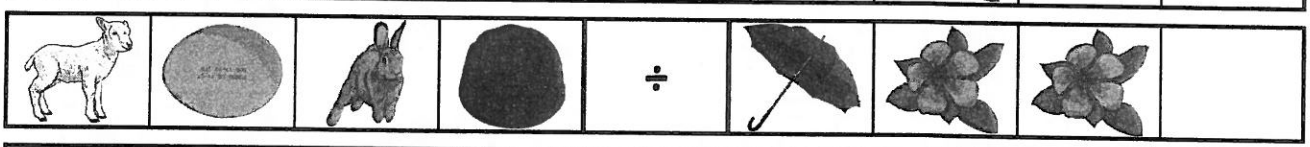
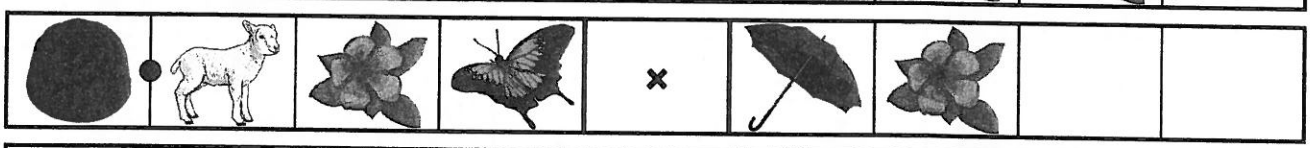
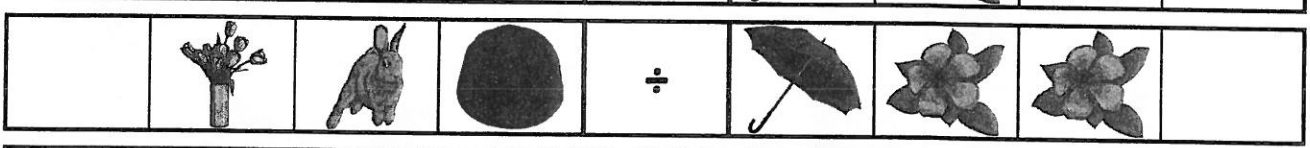
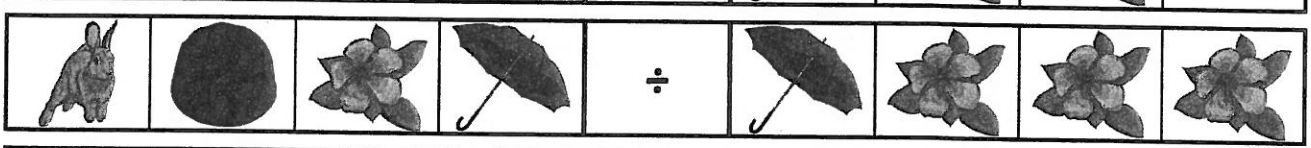
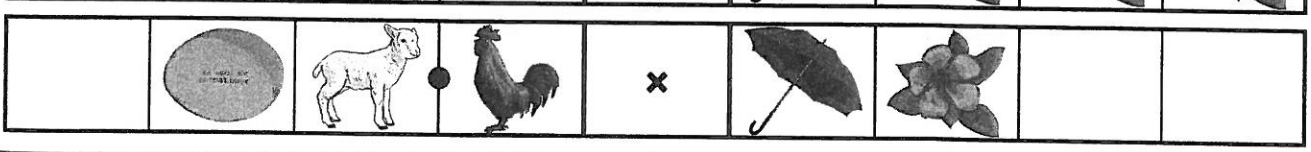
Number Cross: Across

1. 
5. 
8. 
9. 
11. 
13. 
16. 
17. 
20. 
22. 
24. 
25. 
26. 
27. 

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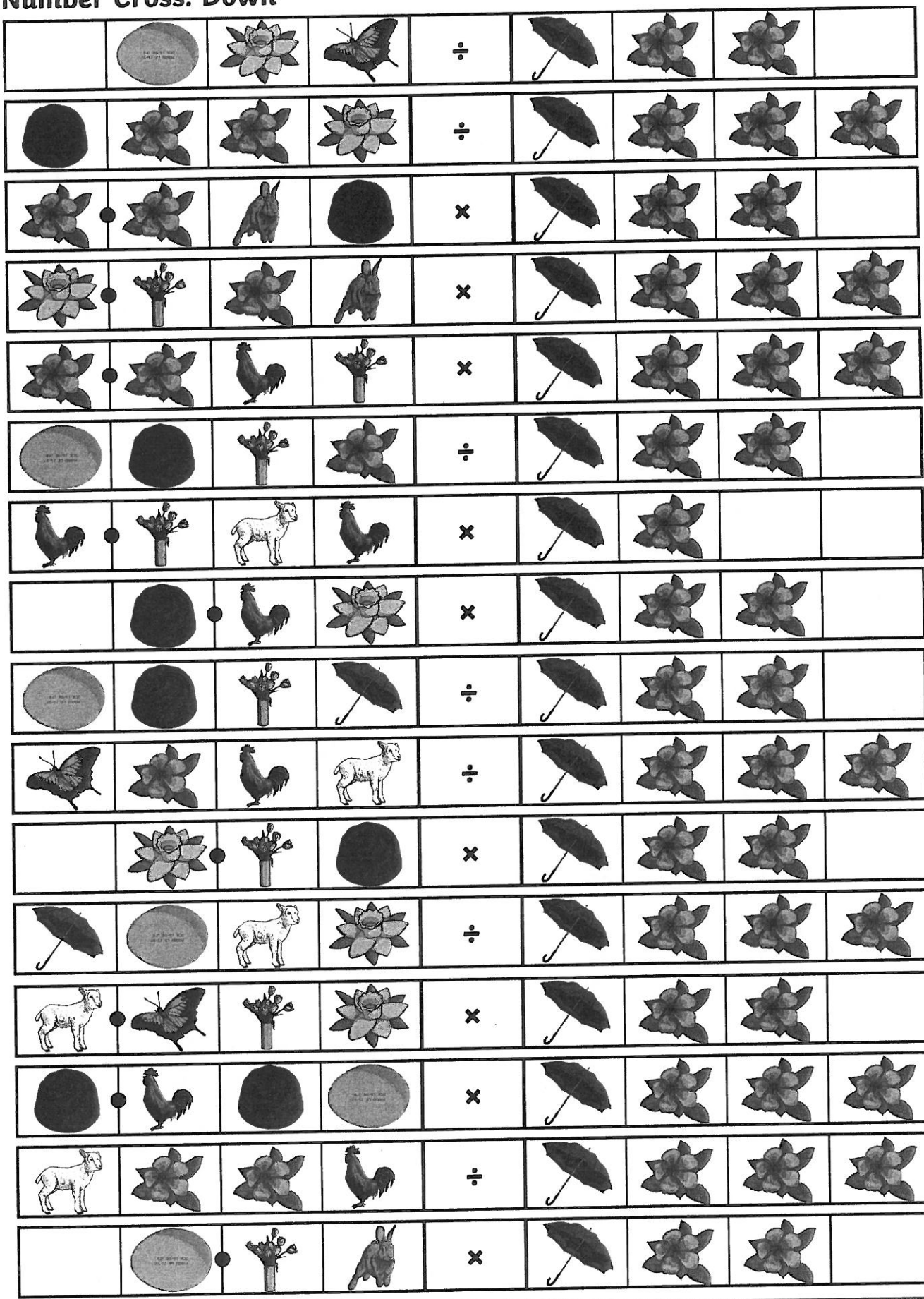
Number Cross: Down



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Maths Mosaic

Calculate each answer and find the colour to shade each square.

Grey:	Pink:	Blue:	Black:	White:
< 1	1 - 1.99	2 - 2.99	3 - 3.99	4 - 4.99

5.8 − 3.23	1.78 + 0.8	3.4 − 0.57	0.7 + 0.24	8.1 − 7.35	5.67 − 3.2	0.18 + 0.71	1.65 − 0.9	7.66 − 6.9	0.2 + 2.47
4.5 − 2.14	7.5 − 5.03	0.98 + 1.2	5.3 − 3.78	4.5 − 3.6	4.87 − 2.3	0.1 + 0.78	7.3 − 6.12	0.45 + 0.1	5.4 − 3.12
1.2 + 1.34	6.7 − 4.5	0.56 + 1.6	3.76 − 2.3	0.56 + 0.4	0.76 + 1.9	0.24 + 0.7	2.76 − 0.9	0.39 + 0.3	2.56 + 0.2
9.2 − 6.89	1.4 + 1.34	3.4 − 0.87	1.23 + 0.6	6.95 − 6.3	2.1 + 0.45	8.2 − 7.89	7.46 − 6.3	7.12 − 6.7	5.8 − 3.43
3.46 − 0.86	1.67 + 0.9	0.23 + 0.4	0.12 + 0.5	9.45 − 8.8	0.12 + 0.7	6.5 − 5.87	0.4 + 0.57	3.98 − 3.7	1.45 + 1.2
3.7 − 0.98	3.4 + 1.39	1.56 + 1.7	4.35 − 4.2	0.37 + 0.3	9.4 − 5.21	7.02 − 3.4	5.1 − 4.67	0.23 + 0.6	2.1 + 0.67
3.6 − 0.76	2.76 + 1.6	7.8 − 3.45	9.1 − 8.56	6.12 − 5.4	6.07 − 1.4	2.76 + 1.6	1.56 − 0.8	7.57 − 6.9	5.6 − 3.16
4.5 − 3.88	0.54 + 0.3	3.2 − 2.87	0.56 + 0.2	7.5 − 6.89	2.3 − 1.87	0.23 + 0.6	0.87 + 0.1	6.35 − 5.7	2.4 + 0.23
7.12 − 6.4	0.76 + 0.8	0.56 + 0.9	3.7 − 2.09	0.34 + 0.5	8.9 − 7.93	0.06 + 0.4	3.4 − 2.67	0.4 + 0.38	8.7 − 6.23
0.37 + 0.6	4.5 − 4.07	2.56 − 1.2	3.4 − 3.03	5.05 − 4.1	7.6 − 7.23	0.1 + 0.89	4.6 − 4.08	0.23 + 0.6	0.01 + 1.99

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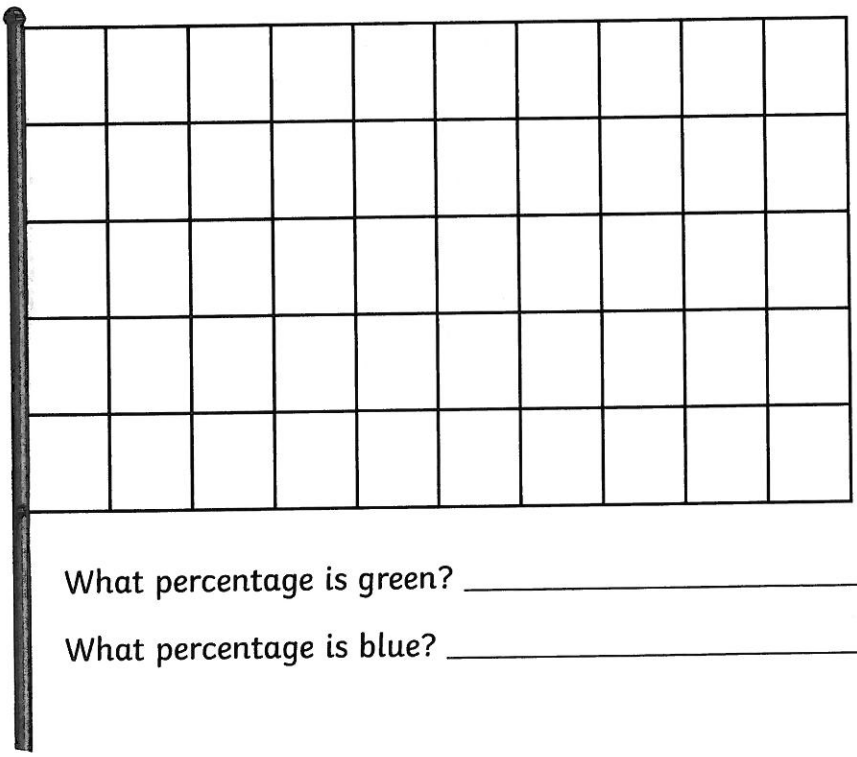
Spring Flags

These flags have been designed on centimetre square grids.

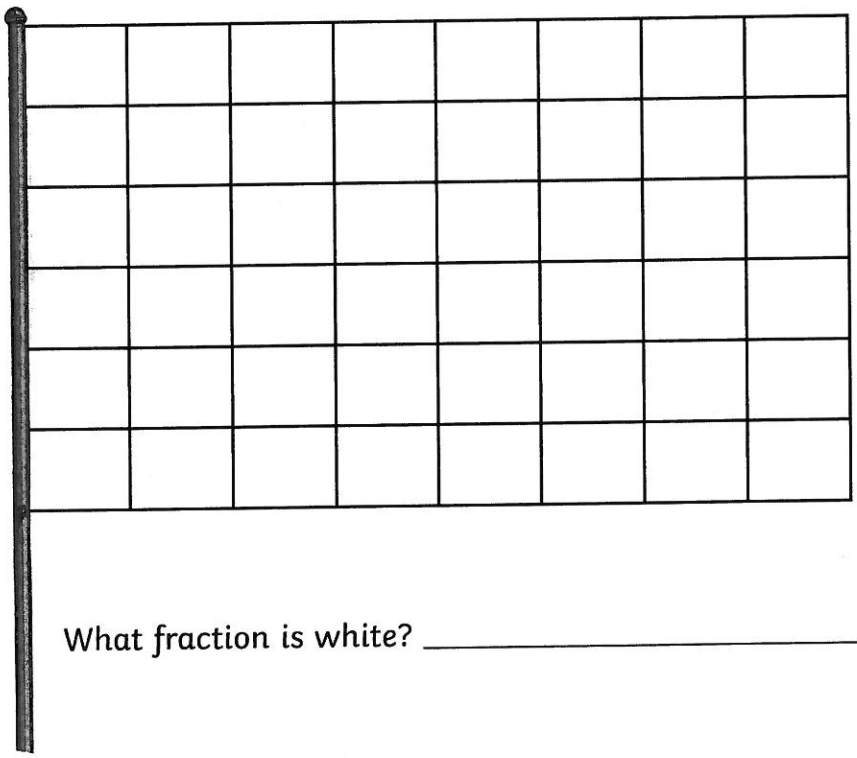
Colour the flags according to the fractions:



Red = $\frac{1}{5}$	_____
Green = $\frac{3}{10}$	_____
Blue = $\frac{1}{2}$	_____

What percentage is green? _____.

What percentage is blue? _____.



Red = $\frac{1}{4}$	_____
Green = $\frac{1}{3}$	_____
Blue = $\frac{1}{8}$	_____

What fraction is white? _____.

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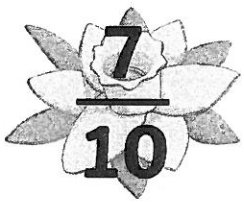
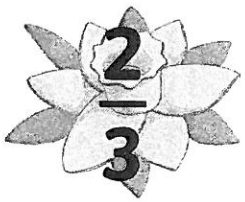
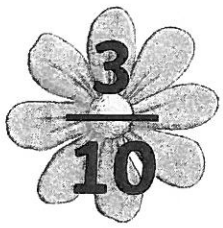
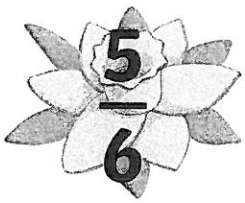
Converting Equivalent Fractions Board Game

Instructions:

- Choose a space to start from and place your counter on it.
- Roll a dice and move clockwise that number of spaces.
- Find an equivalent fraction on the flowers and cover it over.
- If you land on a square where the answer has already been covered, miss your go.
- The winner is the player who covers the last flower.

$\frac{4}{8}$	$\frac{6}{8}$	$\frac{21}{30}$	$\frac{2}{10}$	$\frac{15}{18}$
$\frac{14}{24}$				$\frac{6}{9}$
$\frac{15}{20}$				$\frac{6}{12}$
$\frac{22}{33}$				$\frac{15}{24}$
$\frac{9}{30}$	$\frac{3}{15}$	$\frac{21}{36}$	$\frac{8}{16}$	$\frac{9}{12}$

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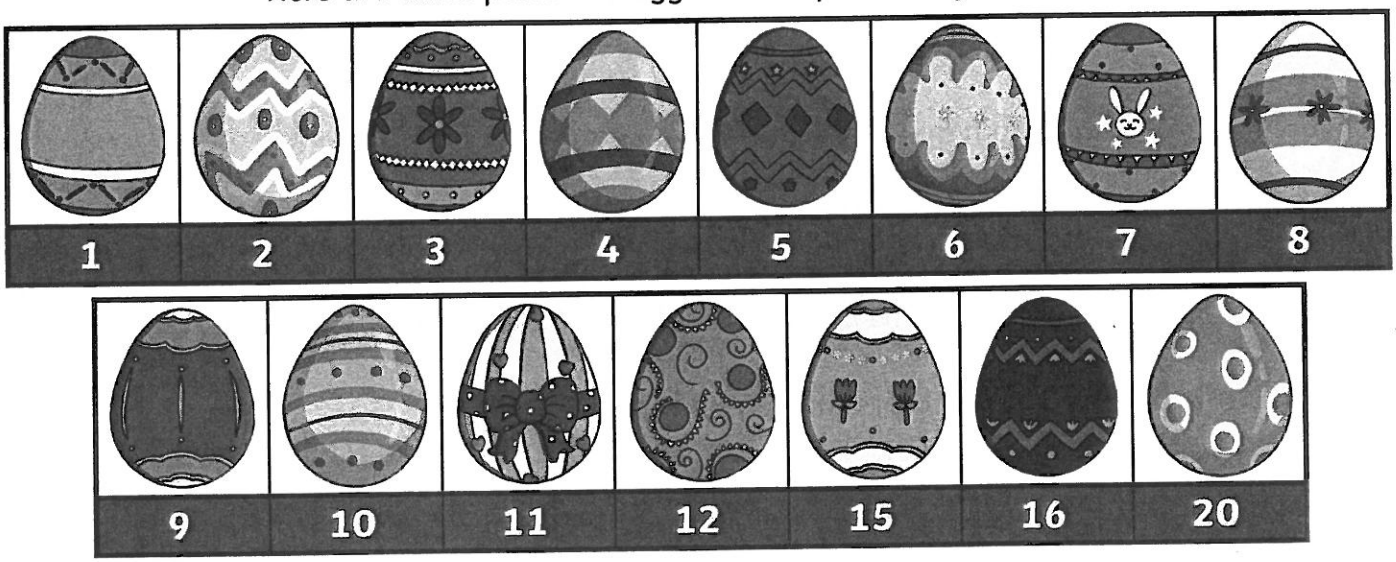
Order Egg Fractions

Here are some patterned eggs each representing a number:



Use the code to find the 3 fractions in each line, and order from smallest to greatest.

___ ___	___ ___	___ ___	___ , ___ , ___
___ ___	___ ___	___ ___	___ , ___ , ___
___ ___	___ ___	___ ___	___ , ___ , ___
___ ___	___ ___	___ ___	___ , ___ , ___

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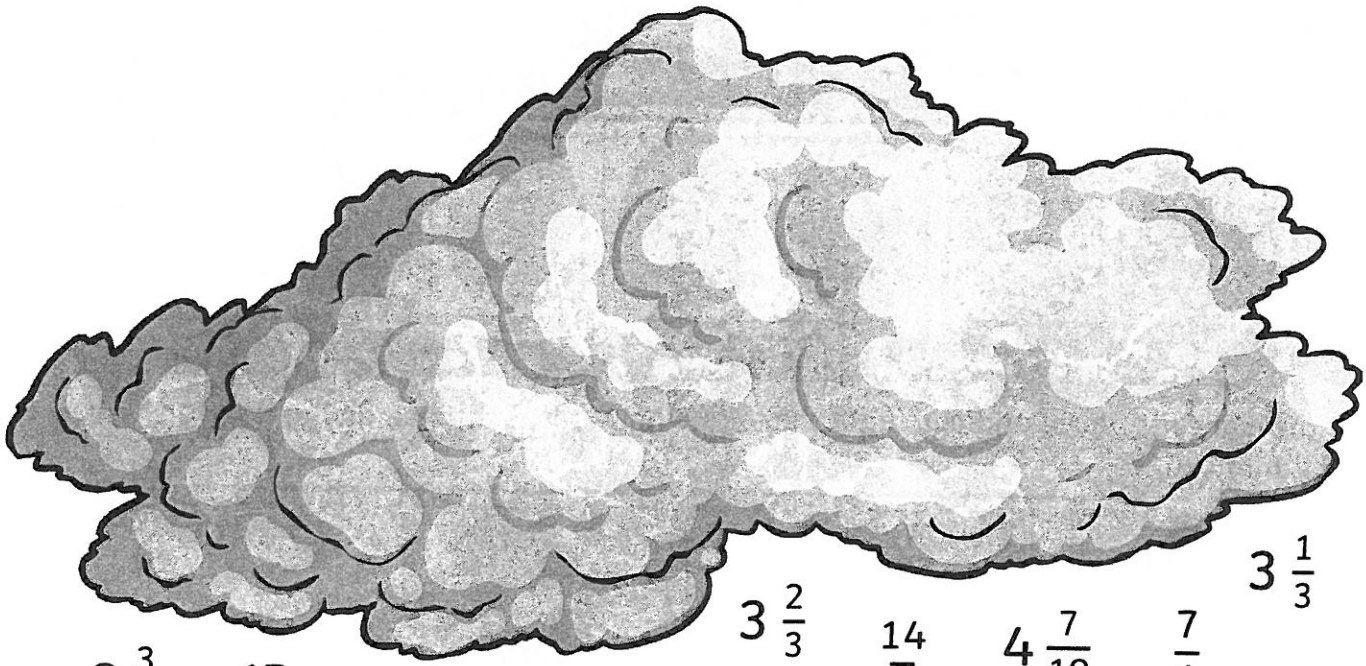
Spring Improper and Mixed Fractions

Match the improper and proper fractions to draw a spring picture.



$3\frac{1}{3}$ $3\frac{2}{3}$ $\frac{14}{5}$ $4\frac{7}{10}$ $\frac{7}{6}$ $3\frac{3}{4}$ $\frac{17}{6}$ $1\frac{7}{8}$ $\frac{13}{5}$ $4\frac{1}{2}$

$3\frac{1}{4}$ $2\frac{1}{6}$ $\frac{11}{8}$ $\frac{9}{2}$ $\frac{11}{3}$ $4\frac{9}{10}$ $\frac{47}{10}$ $1\frac{5}{8}$ $\frac{15}{6}$ $\frac{15}{4}$ $2\frac{5}{6}$ $\frac{15}{8}$ $2\frac{3}{5}$ $2\frac{4}{5}$ $1\frac{5}{6}$ $\frac{12}{3}$ $1\frac{1}{6}$ $\frac{10}{3}$

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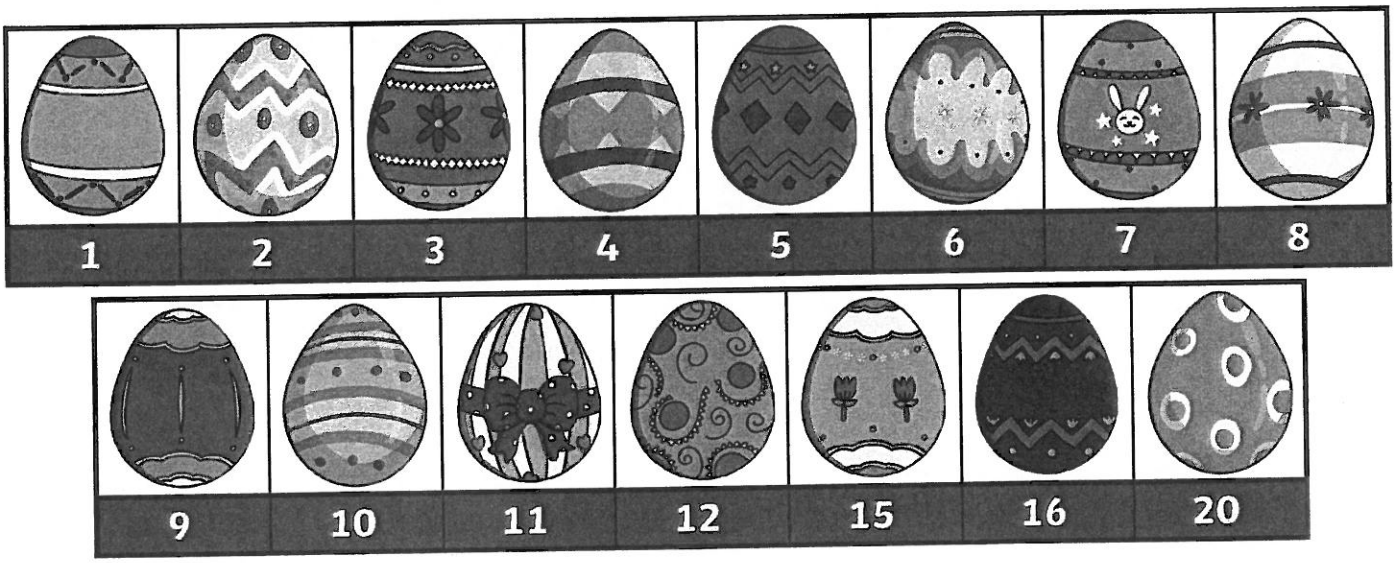
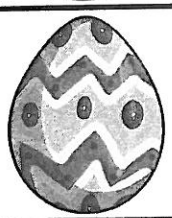
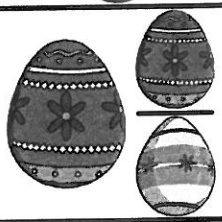
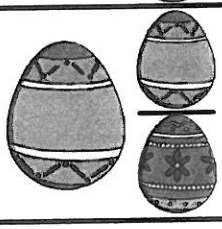
Multiply Egg Fractions



Use the egg code above and calculate the following multiplications, giving your answer as a mixed number.

	×		
	×		
	×		
	×		
	×		

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Spring Holiday Activities Board Game

You will need:

- counters
- a dice
- pencil

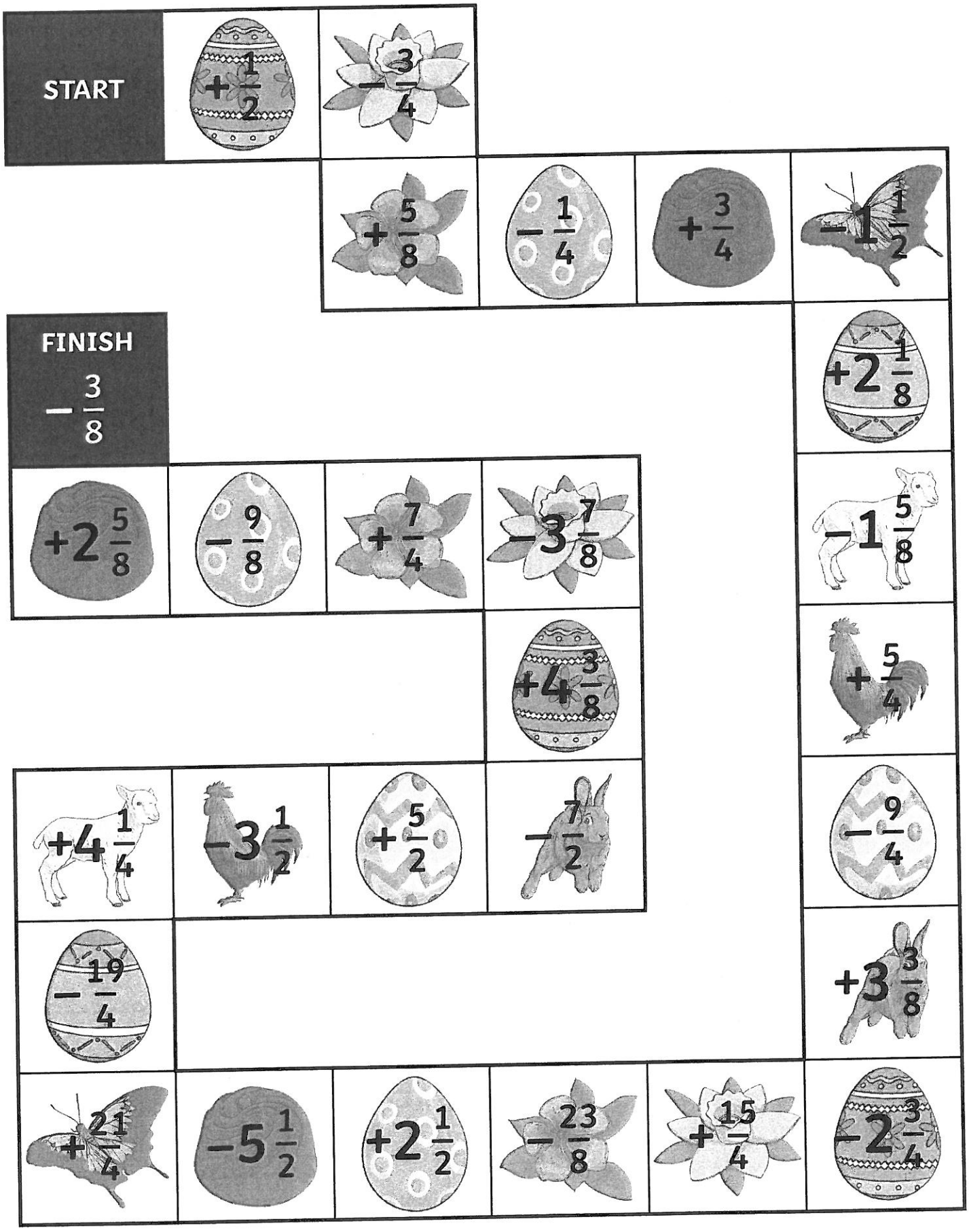
Instructions:

- Each player starts the game with 10 points.
- Take turns to throw the dice and move your counter around the board.
- When you land on a square, add or subtract the points on that square to or from your score.
- When a player reaches the finish, the player with the most points is the winner.

Keep track of your score here:

Name:	Name:	Name:	Name:
10	10	10	10

Spring Holiday Activities Board Game



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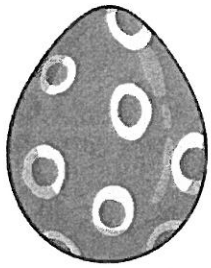
Spring Fraction Riddles



I buy some bags of eggs that each contain 24 eggs.

I use the eggs from $\frac{3}{4}$ of the bags and hide them in the playground.

The children find all of the eggs and share them out equally. Each child gets one egg.

There are $\frac{1}{6}$ of the hidden eggs left over.

The children come from 2 classes of 30 children.

How many bags of eggs did I buy?

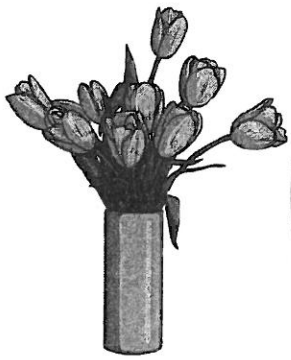
I buy some bunches of tulips of different colours.

$\frac{1}{6}$ of the bunches are red tulips.

$\frac{1}{4}$ of the bunches are yellow tulips.

$\frac{1}{3}$ of the bunches are blue tulips.

There are 6 other bunches.



How many bunches of tulips did I buy?