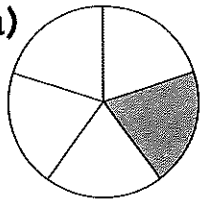
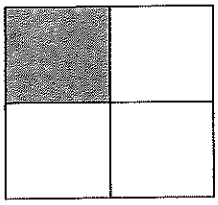
Fractions

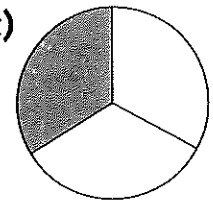
PS Problem-solving questions

Challenge 1

1 What fraction of the shapes is shaded?

a)  ☐

b)  ☐

c)  ☐

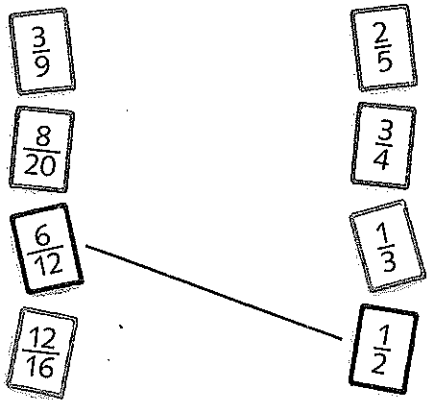
3 marks

2 Simplify these fractions.

a) $\frac{5}{10}$ ☐ b) $\frac{8}{24}$ ☐ c) $\frac{8}{12}$ ☐

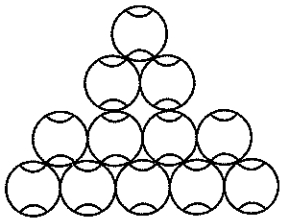
3 marks

3 Draw lines to join the equivalent fractions. One has been done for you.



3 marks

4 Shade $\frac{1}{4}$ of these tennis balls.



1 mark

Marks..... /10

Challenge 2

PS **1** Order these fractions from the smallest to the largest.

$\frac{3}{4}$ $\frac{1}{8}$ $\frac{1}{2}$ $\frac{1}{4}$

Smallest ☐ ☐ ☐ ☐ **Largest**

3 marks

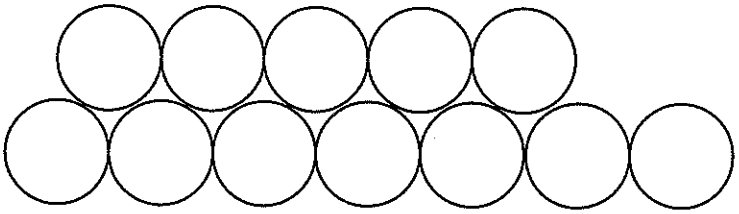
2 Simplify these fractions.

a) $\frac{9}{12}$ ☐ b) $\frac{6}{24}$ ☐ c) $\frac{6}{45}$ ☐

3 marks

Fractions

3 Shade $\frac{3}{4}$ of these squash balls.



1 mark

PS **4** Use >, < or = between these pairs of fractions.

a) $\frac{3}{4}$ ☐ $\frac{7}{8}$ **b)** $\frac{10}{15}$ ☐ $\frac{1}{3}$ **c)** $\frac{6}{12}$ ☐ $\frac{4}{8}$

3 marks

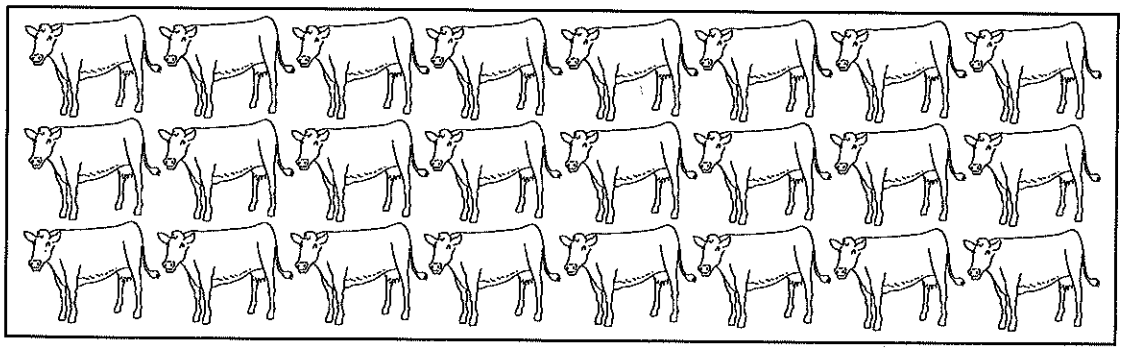
Marks..... /10

Challenge 3

PS **1** Farmer Green has 24 cows.

$\frac{3}{8}$ are black, $\frac{1}{6}$ are brown, $\frac{3}{12}$ are spotted and the rest are white.

Shade the cows to show the number of each colour.



3 marks

PS **2** Order these fractions from the smallest to the largest.

$\frac{6}{12}$ $\frac{3}{4}$ $\frac{3}{8}$ $\frac{1}{4}$ $\frac{5}{8}$

Smallest ☐ ☐ ☐ ☐ ☐ **Largest**

4 marks

PS **3** Use >, < or = between these pairs of fractions.

a) $\frac{25}{30}$ ☐ $\frac{10}{25}$ **b)** $\frac{12}{18}$ ☐ $\frac{30}{45}$ **c)** $\frac{16}{28}$ ☐ $\frac{9}{15}$

3 marks

Marks..... /10

Total marks ..... /30 How am I doing?

Adding, Subtracting, Multiplying and Dividing Fractions

Challenge 1

1	a) $\frac{2}{7} + \frac{3}{7} =$	b) $\frac{3}{12} + \frac{4}{12} =$	c) $\frac{3}{5} + \frac{4}{5} =$
2	a) $\frac{6}{15} - \frac{3}{15} =$	b) $\frac{9}{12} - \frac{4}{12} =$	c) $\frac{12}{10} - \frac{1}{10} =$
3	a) $\frac{1}{3} \times \frac{1}{4} =$	b) $\frac{1}{5} \times \frac{1}{3} =$	c) $\frac{1}{7} \times \frac{1}{2} =$
4	a) $\frac{1}{4} \div 2 =$	b) $\frac{1}{2} \div 2 =$	c) $\frac{1}{5} \div 2 =$

3 marks 3 marks 3 marks 3 marks

Marks..... /12

Challenge 2

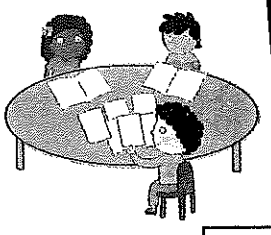
1	a) $\frac{1}{5} + \frac{1}{10} =$	b) $\frac{1}{4} + \frac{1}{2} =$	c) $\frac{1}{4} + \frac{1}{8} =$
2	a) $\frac{6}{10} - \frac{1}{5} =$	b) $\frac{9}{12} - \frac{1}{6} =$	c) $\frac{3}{4} - \frac{1}{2} =$
3	a) $\frac{1}{3} \times \frac{1}{9} =$	b) $\frac{1}{5} \times \frac{1}{7} =$	c) $\frac{1}{9} \times \frac{1}{12} =$
4	a) $\frac{1}{8} \div 2 =$	b) $\frac{1}{10} \div 2 =$	c) $\frac{1}{15} \div 2 =$

3 marks 3 marks 3 marks 3 marks

Marks..... /12

Challenge 3

1	a) $\frac{2}{6} + \frac{1}{4} =$	b) $\frac{3}{4} + \frac{1}{3} =$	c) $\frac{3}{7} + \frac{1}{3} =$
2	a) $\frac{6}{15} - \frac{1}{5} =$	b) $\frac{9}{12} - \frac{1}{6} =$	c) $\frac{8}{10} - \frac{1}{4} =$
3	a) $\frac{1}{12} \times \frac{1}{7} =$	b) $\frac{1}{8} \times \frac{1}{15} =$	c) $\frac{1}{13} \times \frac{1}{5} =$
4	a) $\frac{1}{2} \div 4 =$	b) $\frac{1}{12} \div 3 =$	c) $\frac{1}{25} \div 2 =$



3 marks 3 marks 3 marks 3 marks

Marks..... /12

Total marks ..... /36 How am I doing?

Decimal Fractions

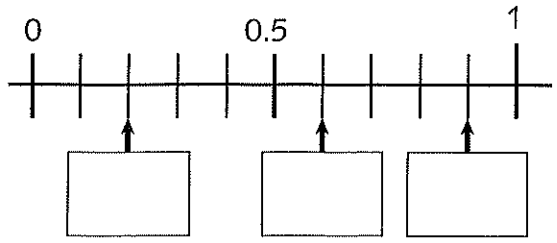
Challenge 1

1 Write these fractions as decimals.

a) $\frac{1}{4}$ _____ **b)** $\frac{3}{4}$ _____ **c)** $\frac{1}{2}$ _____

3 marks

2 Fill in the boxes on the number line.



3 marks

3 Round these decimals to the nearest whole number.

a) 45.6 _____ **b)** 243.2 _____ **c)** 1.62 _____

3 marks

Marks..... /9

Challenge 2

1 Write these fractions as decimals.

a) $\frac{1}{8}$ _____ **b)** $1\frac{3}{4}$ _____ **c)** $\frac{1}{1000}$ _____

3 marks

2 Fill in the missing numbers.

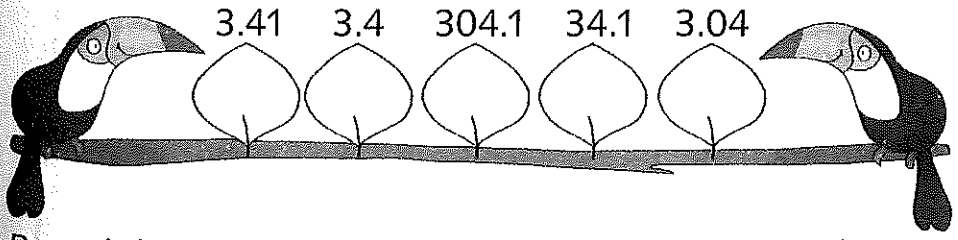
$\square \times 100 = 3.45$ $67.34 \div \square = 6.734$

2 marks

Marks..... /5

Challenge 3

1 Order these decimals from the smallest to the largest.



1 mark

2 Round these to one decimal place.

a) 45.64 _____ **b)** 243.27 _____ **c)** 1.95 _____

3 marks

Marks..... /4

Total marks ..... /18 How am I doing?

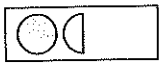
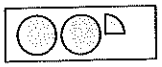
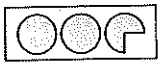
Improper Fractions and Mixed Numbers

PS Problem-solving questions

Challenge 1

1 $1\frac{3}{4}$ is a mixed number.

What mixed numbers do these represent?

a)  _____ **b)**  _____ **c)**  _____

3 marks

2 Put a tick (✓) beside the fractions greater than 1 and a cross (✗) beside the fractions less than 1.

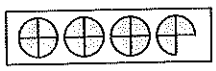
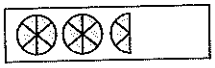
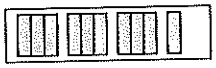
$\frac{4}{5}$ ☐ $\frac{7}{6}$ ☐ $1\frac{1}{2}$ ☐ $\frac{2}{3}$ ☐ $\frac{5}{4}$ ☐

5 marks

Marks..... /8

Challenge 2

1 What improper fractions do these represent?

a)  ☐ **b)**  ☐ **c)**  ☐

3 marks

2 Convert these improper fractions to mixed numbers.

a) $\frac{11}{6}$ _____ **b)** $\frac{14}{3}$ _____ **c)** $\frac{15}{4}$ _____

3 marks

Marks..... /6

Challenge 3

1 Give your answers as mixed numbers.

a) $\frac{9}{5} + \frac{2}{5} =$ _____ **b)** $\frac{7}{8} + \frac{7}{8} =$ _____ **c)** $\frac{4}{5} + \frac{6}{5} + \frac{3}{5} =$ _____

3 marks

2 Use >, < or = to make these statements correct.

a) $\frac{15}{6}$ ☐ $\frac{5}{2}$ **b)** $1\frac{4}{5}$ ☐ $\frac{11}{5}$

2 marks

Marks..... /5

Total marks ..... /19 How am I doing?

Percentages

Challenge 1

1 What are the percentages represented by these fractions?

a) $\frac{1}{4}$ _____ **b)** $\frac{3}{4}$ _____ **c)** $\frac{1}{2}$ _____

3 marks

2 Find:

a) 25% of 36 _____ **b)** 50% of 128 _____ **c)** 75% of 60 _____

3 marks

Marks..... /6

Challenge 2

1 Find:

a) 10% of 125 _____ **b)** 30% of 120 _____ **c)** 80% of 60 _____

3 marks

PS **2** Last year my rail card cost £32. This year the price has **increased** by 20%. How much will my rail card cost this year?

£ _____

1 mark

Marks..... /4

Challenge 3

PS **1** Peter got $\frac{15}{20}$ for his Maths test and $\frac{18}{25}$ for his Geography test.

Which subject did he do better in? _____

1 mark

2 Use >, < or = to make these statements correct.

a) $\frac{24}{40}$ ☐ $\frac{21}{30}$ **b)** $\frac{8}{20}$ ☐ $\frac{24}{60}$ **c)** $\frac{4}{25}$ ☐ $\frac{7}{50}$

3 marks

PS **3** Next year house prices are set to rise by 15%. If my house cost £135 000 this year, how much will it be worth next year?

£ _____

1 mark

Marks..... /5

Total marks ..... /15 **How am I doing?**