How to become a fraction expert

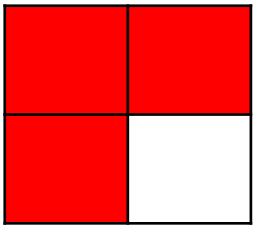
What are fractions?

Fractions represent equal parts of a whole that has been divided into equal parts.

Parts of a fraction

$\frac{3}{4}$

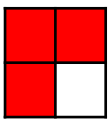
- This is the numerator. It represents how many equal parts you have or are being counted.
- This is the vinculum. It separates the numerator and denominator.
- This is the denominator. It represents how many equal parts the whole has been divided into.



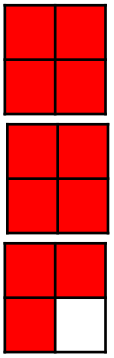
The shaded squares show $\frac{3}{4}$ as the shape has been divided in to four equal parts and three of them are shaded.

Types of fractions

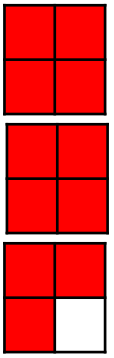
$\frac{3}{4}$



$2\frac{3}{4}$



$\frac{11}{4}$



Proper fraction

A proper fraction is less than one whole. The numerator is smaller than the denominator

Mixed number

A mixed number is more than one whole. It is made up of a whole number and a fraction.

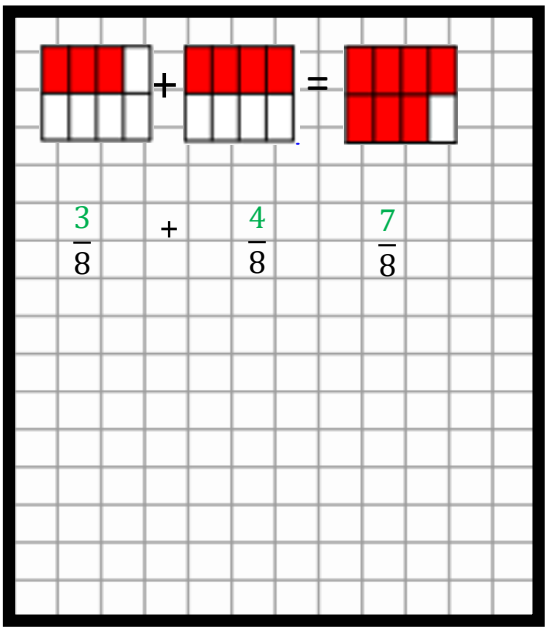
Improper fraction

An improper fraction is more than one whole. The numerator is larger than the denominator.

Add fractions with the same denominator

Add the numerators together.

The denominator does not change, as the size of the parts (eighths) doesn't change, but we are adding two parts together.



Set 1

1) $\frac{2}{12} + \frac{6}{12}$

2) $\frac{1}{4} + \frac{1}{4}$

3) $\frac{4}{11} + \frac{5}{11}$

4) $\frac{2}{12} + \frac{6}{12}$

5) $\frac{1}{6} + \frac{4}{6}$

6) $\frac{1}{3} + \frac{1}{3}$

7) $\frac{3}{9} + \frac{5}{9}$

8) $\frac{1}{8} + \frac{6}{8}$

Set 2

1) $\frac{3}{12} + \frac{7}{12}$

2) $\frac{2}{11} + \frac{5}{11}$

3) $\frac{1}{10} + \frac{5}{10}$

4) $\frac{2}{7} + \frac{2}{7}$

5) $\frac{3}{9} + \frac{4}{9}$

6) $\frac{1}{10} + \frac{1}{10}$

7) $\frac{1}{3} + \frac{1}{3}$

8) $\frac{5}{12} + \frac{6}{12}$

Set 3

1) $\frac{4}{11} + \frac{6}{11}$

2) $\frac{1}{10} + \frac{4}{10}$

3) $\frac{1}{7} + \frac{2}{7}$

4) $\frac{1}{9} + \frac{7}{9}$

5) $\frac{4}{12} + \frac{5}{12}$

6) $\frac{1}{9} + \frac{1}{9}$

7) $\frac{1}{6} + \frac{1}{6}$

8) $\frac{2}{11} + \frac{2}{11}$

Set 4

1) $\frac{2}{11} + \frac{9}{11}$

2) $\frac{1}{11} + \frac{5}{11}$

3) $\frac{2}{12} + \frac{9}{12}$

4) $\frac{1}{7} + \frac{1}{7}$

5) $\frac{1}{10} + \frac{3}{10}$

6) $\frac{1}{6} + \frac{1}{6}$

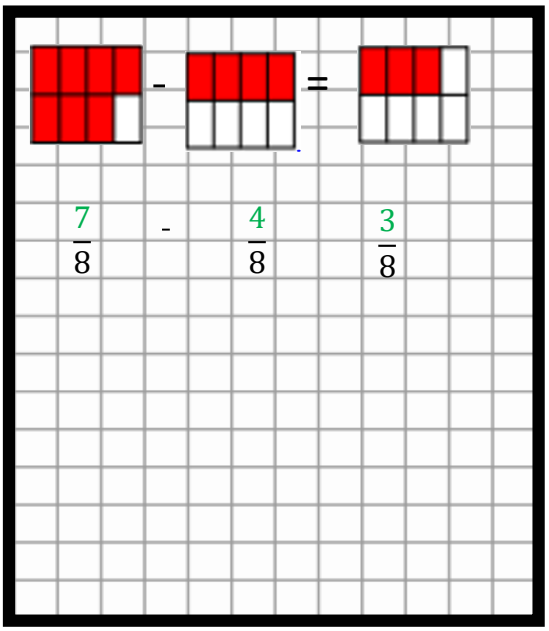
7) $\frac{2}{8} + \frac{3}{8}$

8) $\frac{2}{10} + \frac{2}{10}$

Subtract fractions with the same denominator

Subtract the second denominator from the first.

The denominator does not change, as the size of the parts (eighths) doesn't change, but we are subtracting one part from another.



Set 1

1) $\frac{2}{12} - \frac{1}{12}$

2) $\frac{8}{10} - \frac{2}{10}$

3) $\frac{7}{11} - \frac{3}{11}$

4) $\frac{5}{11} - \frac{3}{11}$

5) $\frac{4}{7} - \frac{3}{7}$

6) $\frac{9}{10} - \frac{4}{10}$

7) $\frac{2}{3} - \frac{1}{3}$

8) $\frac{5}{9} - \frac{2}{9}$

Set 2

1) $\frac{2}{10} - \frac{1}{10}$

2) $\frac{3}{12} - \frac{2}{12}$

3) $\frac{8}{9} - \frac{5}{9}$

4) $\frac{7}{12} - \frac{5}{21}$

5) $\frac{4}{11} - \frac{2}{11}$

6) $\frac{3}{4} - \frac{2}{4}$

7) $\frac{3}{12} - \frac{2}{12}$

8) $\frac{4}{11} - \frac{2}{11}$

Set 3

1) $\frac{5}{12} - \frac{1}{12}$

2) $\frac{5}{8} - \frac{2}{8}$

3) $\frac{6}{11} - \frac{3}{11}$

4) $\frac{4}{10} - \frac{3}{10}$

5) $\frac{11}{12} - \frac{2}{12}$

6) $\frac{9}{12} - \frac{3}{12}$

7) $\frac{3}{6} - \frac{2}{6}$

8) $\frac{6}{7} - \frac{4}{7}$

Set 4

1) $\frac{2}{4} - \frac{1}{4}$

2) $\frac{3}{10} - \frac{2}{10}$

3) $\frac{7}{12} - \frac{2}{12}$

4) $\frac{2}{3} - \frac{1}{3}$

5) $\frac{2}{6} - \frac{1}{6}$

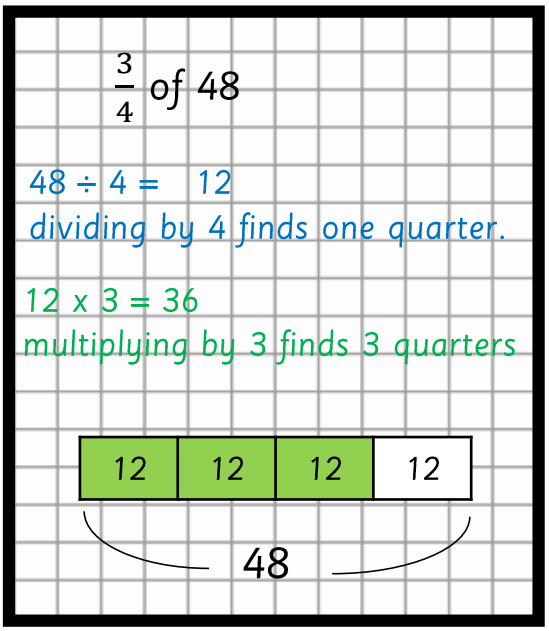
6) $\frac{9}{12} - \frac{8}{12}$

7) $\frac{4}{5} - \frac{3}{5}$

8) $\frac{6}{10} - \frac{3}{10}$

Find fractions of numbers

1) Divide the whole number by the denominator.
(48 ÷ 4 = 12)
2) Multiply the answer by the numerator
(12 x 3 = 36)



Set 1

1) $\frac{1}{8}$ of 72
2) $\frac{1}{9}$ of 54
3) $\frac{1}{4}$ of 52
4) $\frac{1}{5}$ of 175
5) $\frac{1}{6}$ of 300
6) $\frac{1}{10}$ of 100
7) $\frac{3}{4}$ of 100
8) $\frac{2}{5}$ of 25

Set 2

1) $\frac{1}{8}$ of 72
2) $\frac{1}{9}$ of 54
3) $\frac{1}{4}$ of 52
4) $\frac{1}{5}$ of 175
5) $\frac{1}{6}$ of 300
6) $\frac{1}{10}$ of 100
7) $\frac{3}{4}$ of 100
8) $\frac{2}{5}$ of 25

Set 3

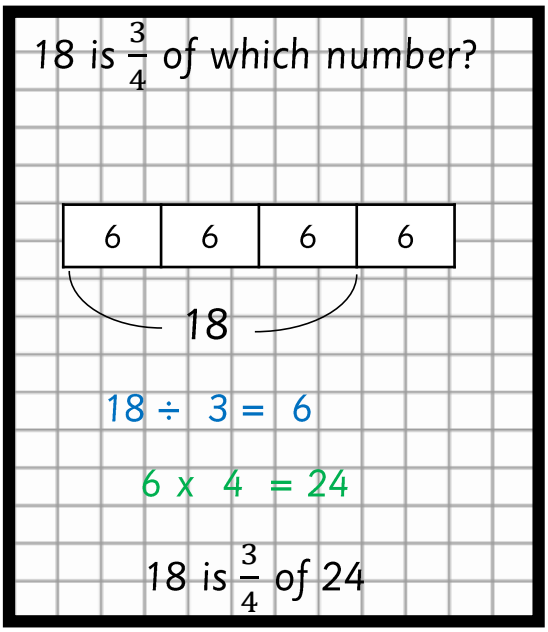
1) $\frac{5}{9}$ of 36
2) $\frac{3}{4}$ of 56
3) $\frac{4}{5}$ of 100
4) $\frac{2}{3}$ of 210
5) $\frac{1}{5}$ of 250
6) $\frac{1}{2}$ of 84
7) $\frac{1}{7}$ of 140
8) $\frac{1}{8}$ of 64

Set 4

1) $\frac{7}{8}$ of 72
2) $\frac{3}{8}$ of 64
3) $\frac{2}{3}$ of 180
4) $\frac{5}{6}$ of 120
5) $\frac{2}{3}$ of 27
6) $\frac{4}{7}$ of 42
7) $\frac{1}{7}$ of 140
8) $\frac{1}{2}$ of 114

Find the whole from a fraction

1) Divide the number by the numerator
(18 ÷ 3 = 6)
2) Multiply the answer by the denominator
(6 x 4= 24)



Set 1

1) $\frac{3}{4}$ of ___ is 36
2) $\frac{2}{5}$ of ___ is 12
3) $\frac{2}{9}$ of ___ is 6
4) $\frac{5}{8}$ of ___ is 15
5) $\frac{7}{8}$ of ___ is 42
6) $\frac{3}{8}$ of ___ is 15
7) $\frac{2}{3}$ of ___ is 8
8) $\frac{7}{9}$ of ___ is 14

Set 2

1) $\frac{2}{3}$ of ___ is 18
2) $\frac{3}{5}$ of ___ is 12
3) $\frac{5}{9}$ of ___ is 10
4) $\frac{7}{8}$ of ___ is 49
5) $\frac{7}{10}$ of ___ is 42
6) $\frac{3}{7}$ of ___ is 15
7) $\frac{2}{5}$ of ___ is 8
8) $\frac{7}{11}$ of ___ is 14

Set 3

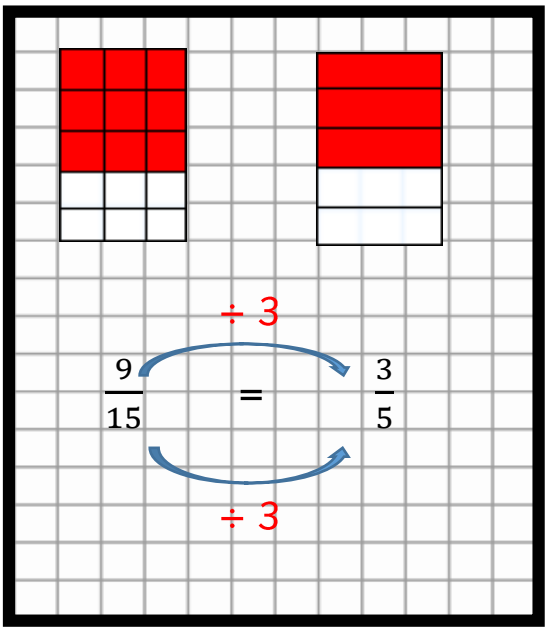
1) $\frac{3}{5}$ of ___ is 18
2) $\frac{3}{7}$ of ___ is 12
3) $\frac{2}{9}$ of ___ is 10
4) $\frac{7}{12}$ of ___ is 49
5) $\frac{7}{10}$ of ___ is 35
6) $\frac{3}{7}$ of ___ is 21
7) $\frac{3}{5}$ of ___ is 9
8) $\frac{2}{11}$ of ___ is 24

Set 4

1) $\frac{3}{7}$ of ___ is 24
2) $\frac{5}{7}$ of ___ is 15
3) $\frac{4}{7}$ of ___ is 20
4) $\frac{7}{12}$ of ___ is 56
5) $\frac{8}{11}$ of ___ is 40
6) $\frac{6}{7}$ of ___ is 24
7) $\frac{3}{10}$ of ___ is 15
8) $\frac{4}{11}$ of ___ is 8

Using common factors to simplify fractions

1) Find a number that both the numerator and the denominator can be divided by (in this case, 3)
2) Divide both the numerator and denominator by that number.



Set 1

1) $\frac{4}{12}$
2) $\frac{30}{36}$
3) $\frac{6}{18}$
4) $\frac{5}{10}$
5) $\frac{3}{6}$
6) $\frac{4}{12}$
7) $\frac{15}{20}$
8) $\frac{3}{9}$

Set 2

1) $\frac{6}{12}$
2) $\frac{8}{12}$
3) $\frac{3}{12}$
4) $\frac{4}{24}$
5) $\frac{4}{16}$
6) $\frac{4}{8}$
7) $\frac{3}{15}$
8) $\frac{12}{18}$

Set 3

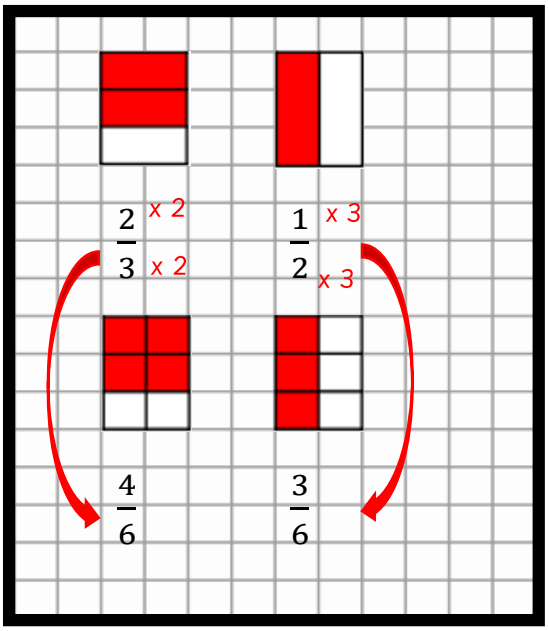
1) $\frac{6}{24}$
2) $\frac{5}{15}$
3) $\frac{24}{36}$
4) $\frac{12}{30}$
5) $\frac{2}{8}$
6) $\frac{6}{9}$
7) $\frac{12}{36}$
8) $\frac{15}{25}$

Set 4

1) $\frac{6}{12}$
2) $\frac{15}{20}$
3) $\frac{6}{36}$
4) $\frac{3}{18}$
5) $\frac{3}{9}$
6) $\frac{15}{30}$
7) $\frac{5}{10}$
8) $\frac{4}{10}$

Use multiples to express fractions in the same denominator

1) Find a common multiple of both denominators (in this case, 6)
2) Work out what the denominators need to be multiplied by to reach the new denominator
3) Multiply the numerators by the same number



Set 1

1) $\frac{1}{12} = \frac{}{24}$
2) $\frac{}{5} = \frac{9}{15}$
3) $\frac{8}{} = \frac{4}{12}$
4) $\frac{3}{10} = \frac{}{40}$
5) $\frac{7}{8} = \frac{21}{}$
6) $\frac{}{15} = \frac{22}{30}$
7) $\frac{30}{} = \frac{5}{6}$
8) $\frac{3}{4} = \frac{}{12}$

Set 2

1) $\frac{}{9} = \frac{1}{3}$
2) $\frac{6}{} = \frac{1}{6}$
3) $\frac{2}{3} = \frac{}{12}$
4) $\frac{5}{} = \frac{10}{16}$
5) $\frac{11}{12} = \frac{}{144}$
6) $\frac{8}{} = \frac{4}{6}$
7) $\frac{9}{18} = \frac{}{2}$
8) $\frac{}{6} = \frac{20}{24}$

Set 3

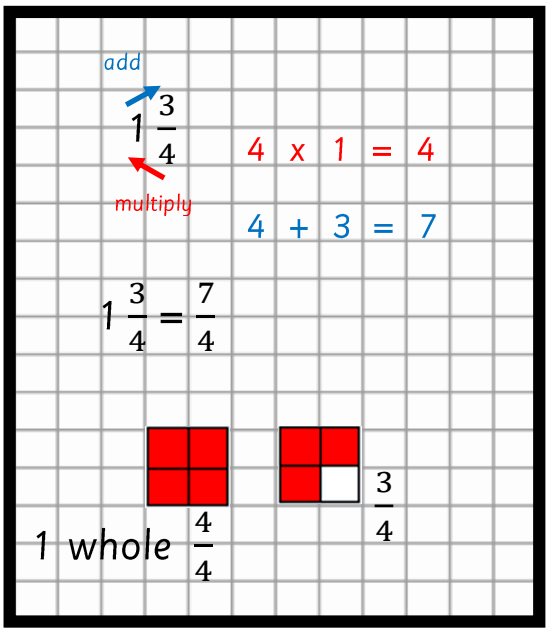
1) $\frac{}{8} = \frac{6}{16}$
2) $\frac{33}{} = \frac{11}{1}$
3) $\frac{2}{5} = \frac{}{20}$
4) $\frac{}{7} = \frac{24}{28}$
5) $\frac{40}{48} = \frac{}{6}$
6) $\frac{1}{} = \frac{5}{45}$
7) $\frac{2}{11} = \frac{}{66}$
8) $\frac{5}{} = \frac{3}{30}$

Set 4

1) $\frac{}{11} = \frac{8}{22}$
2) $\frac{9}{10} = \frac{}{100}$
3) $\frac{8}{} = \frac{4}{11}$
4) $\frac{5}{10} = \frac{}{2}$
5) $\frac{7}{9} = \frac{21}{}$
6) $\frac{}{32} = \frac{4}{16}$
7) $\frac{7}{11} = \frac{}{33}$
8) $\frac{}{8} = \frac{6}{16}$

Convert mixed numbers to improper fractions

1)Multiply the denominator by the whole number.
2) Add the numerator
3) Write the answer as a numerator over the existing denominator



Set 1

1) $5\frac{5}{6} =$

2) $4\frac{1}{4} =$

3) $3\frac{3}{5} =$

4) $6\frac{1}{2} =$

5) $3\frac{2}{3} =$

6) $4\frac{2}{7} =$

7) $3\frac{3}{5} =$

8) $6\frac{3}{5} =$

Set 2

1) $3\frac{3}{5} =$

2) $6\frac{3}{5} =$

3) $6\frac{3}{4} =$

4) $4\frac{3}{5} =$

5) $6\frac{1}{6} =$

6) $9\frac{6}{7} =$

7) $8\frac{3}{5} =$

8) $7\frac{2}{3} =$

Set 3

1) $8\frac{3}{5} =$

2) $3\frac{1}{3} =$

3) $9\frac{4}{9} =$

4) $2\frac{2}{3} =$

5) $3\frac{9}{10} =$

6) $6\frac{3}{5} =$

7) $3\frac{1}{4} =$

8) $7\frac{1}{3} =$

Set 4

1) $4\frac{1}{3} =$

2) $5\frac{1}{2} =$

3) $8\frac{1}{6} =$

4) $4\frac{1}{2} =$

5) $4\frac{3}{5} =$

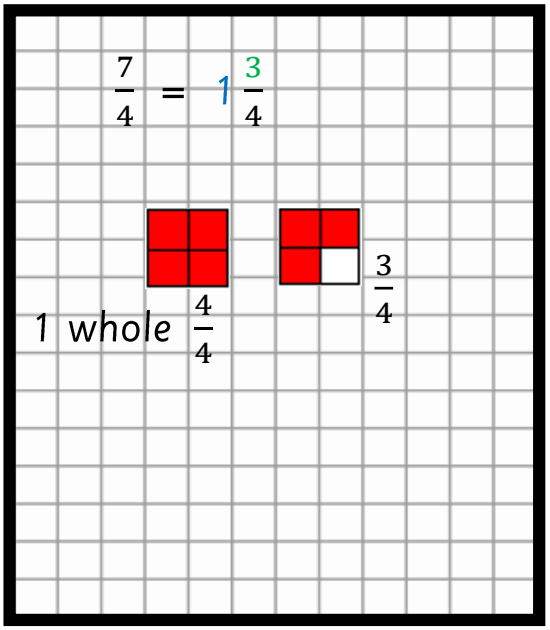
6) $7\frac{1}{2} =$

7) $3\frac{7}{9} =$

8) $9\frac{2}{3} =$

Convert improper fractions to mixed numbers

1) See how many times the denominator will go into the numerator (once, with a remainder of 3)
2) Write the answer (1) as the whole number
3) Write the remainder (3) as the numerator over the existing denominator.



Set 1

1) $\frac{37}{10}$ =

2) $\frac{26}{9}$ =

3) $\frac{36}{7}$ =

4) $\frac{59}{8}$ =

5) $\frac{17}{3}$ =

6) $\frac{37}{6}$ =

7) $\frac{53}{3}$ =

8) $\frac{17}{7}$ =

Set 2

1) $\frac{49}{10}$ =

2) $\frac{16}{5}$ =

3) $\frac{33}{7}$ =

4) $\frac{15}{2}$ =

5) $\frac{21}{6}$ =

6) $\frac{54}{8}$ =

7) $\frac{45}{7}$ =

8) $\frac{14}{5}$ =

Set 3

1) $\frac{20}{6}$ =

2) $\frac{7}{2}$ =

3) $\frac{9}{2}$ =

4) $\frac{27}{4}$ =

5) =

6) $\frac{27}{8}$ =

7) $\frac{36}{7}$ =

8) $\frac{27}{5}$ =

Set 4

1) $\frac{48}{10}$ =

2) $\frac{50}{8}$ =

3) $\frac{15}{2}$ =

4) $\frac{53}{9}$ =

5) $\frac{21}{4}$ =

6) $\frac{22}{8}$ =

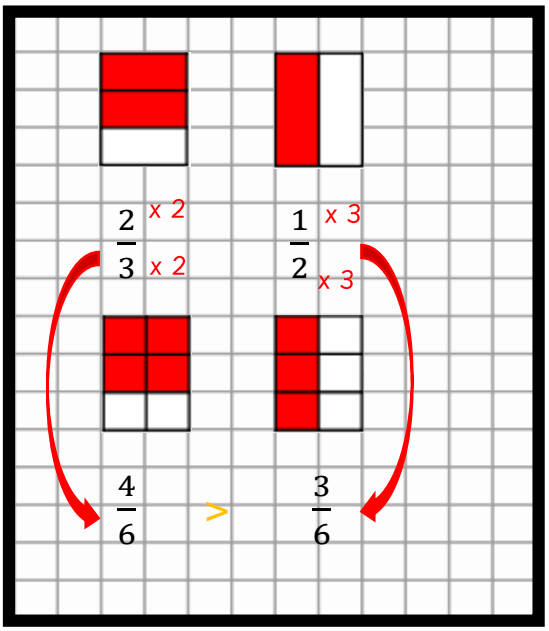
7) $\frac{23}{3}$ =

8) $\frac{40}{7}$ =

Compare fractions

<	>	=
less than	more than	equal to

1) Decide on a common multiple of the two denominators to become the new denominator
2) Convert both fractions to have the same denominator.
3) Decide which symbol to use– which fraction is larger?



Set 1

1)	$\frac{7}{9}$	$\frac{4}{27}$
2)	$\frac{8}{11}$	$\frac{1}{22}$
3)	$\frac{1}{3}$	$\frac{2}{12}$
4)	$\frac{7}{18}$	$\frac{8}{9}$
5)	$\frac{10}{18}$	$\frac{3}{9}$
6)	$\frac{5}{21}$	$\frac{5}{7}$
7)	$\frac{2}{10}$	$\frac{2}{4}$
8)	$\frac{11}{26}$	$\frac{8}{13}$

Set 2

1)	$\frac{9}{26}$	$\frac{2}{13}$
2)	$\frac{4}{7}$	$\frac{1}{4}$
3)	$\frac{10}{20}$	$\frac{8}{10}$
4)	$\frac{2}{11}$	$\frac{11}{22}$
5)	$\frac{6}{15}$	$\frac{3}{30}$
6)	$\frac{2}{3}$	$\frac{10}{12}$
7)	$\frac{6}{9}$	$\frac{7}{27}$
8)	$\frac{1}{10}$	$\frac{1}{3}$

Set 3

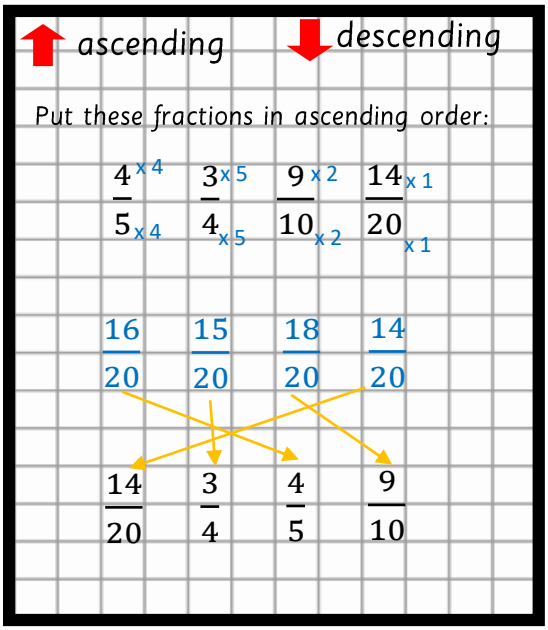
1)	$\frac{9}{27}$	$\frac{8}{9}$
2)	$\frac{3}{4}$	$\frac{3}{6}$
3)	$\frac{2}{3}$	$\frac{4}{6}$
4)	$\frac{4}{21}$	$\frac{5}{7}$
5)	$\frac{8}{13}$	$\frac{9}{26}$
6)	$\frac{9}{16}$	$\frac{2}{4}$
7)	$\frac{3}{6}$	$\frac{3}{18}$
8)	$\frac{1}{5}$	$\frac{5}{20}$

Set 4

1)	$\frac{3}{28}$	$\frac{5}{7}$
2)	$\frac{8}{20}$	$\frac{1}{4}$
3)	$\frac{2}{9}$	$\frac{2}{6}$
4)	$\frac{2}{7}$	$\frac{9}{14}$
5)	$\frac{8}{20}$	$\frac{2}{5}$
6)	$\frac{10}{14}$	$\frac{6}{7}$
7)	$\frac{1}{5}$	$\frac{3}{10}$
8)	$\frac{4}{9}$	$\frac{9}{27}$

Order fractions

1) Decide on a common multiple of the denominators to become the new denominator
2) Convert all the fractions to have the same denominator.
3) Re-order the fractions in their original form.



Place in ascending order

Set 1

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

Set 2

$\frac{3}{5}$ $\frac{1}{3}$ $\frac{2}{3}$ $\frac{2}{15}$

Place in descending order

Set 3

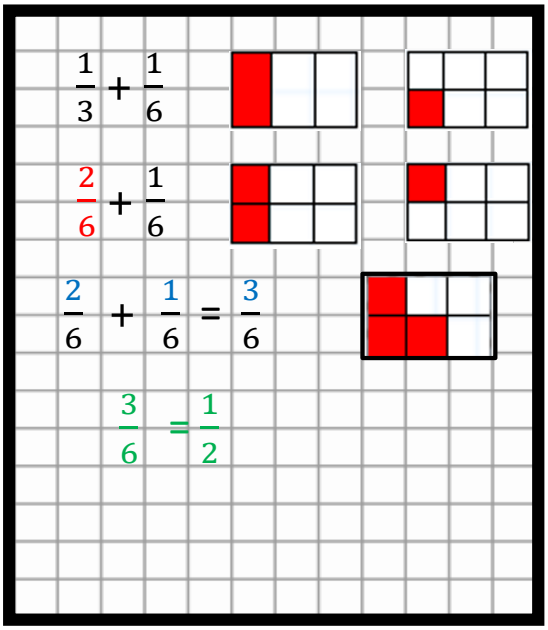
$\frac{3}{8}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{15}{16}$

Set 4

$\frac{4}{5}$ $\frac{19}{20}$ $\frac{1}{4}$ $\frac{11}{10}$

Adding proper fractions

1) Convert both fractions to have the same denominator
2) Add the numerators, but not the denominators.
3) Simplify the answer if you can



Set 1

1) $\frac{9}{27} + \frac{8}{9}$
2) $\frac{3}{4} + \frac{3}{6}$
3) $\frac{2}{3} + \frac{4}{6}$
4) $\frac{4}{21} + \frac{5}{7}$
5) $\frac{8}{13} + \frac{9}{26}$
6) $\frac{9}{16} + \frac{2}{4}$
7) $\frac{3}{6} + \frac{3}{18}$
8) $\frac{1}{5} + \frac{5}{20}$

Set 2

1) $\frac{3}{28} + \frac{5}{7}$
2) $\frac{8}{20} + \frac{1}{4}$
3) $\frac{2}{9} + \frac{2}{6}$
4) $\frac{2}{7} + \frac{9}{14}$
5) $\frac{8}{20} + \frac{2}{5}$
6) $\frac{10}{14} + \frac{6}{7}$
7) $\frac{1}{5} + \frac{3}{10}$
8) $\frac{4}{9} + \frac{9}{27}$

Set 3

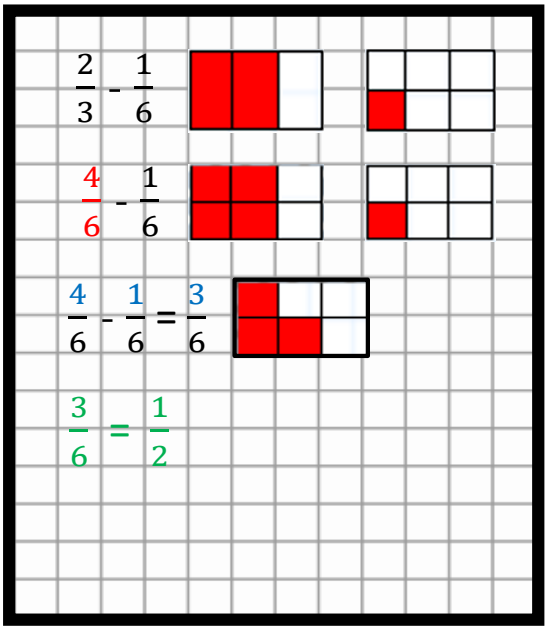
1) $\frac{9}{26} + \frac{2}{13}$
2) $\frac{4}{7} + \frac{1}{4}$
3) $\frac{10}{20} + \frac{8}{10}$
4) $\frac{2}{11} + \frac{11}{22}$
5) $\frac{6}{15} + \frac{3}{30}$
6) $\frac{2}{3} + \frac{10}{12}$
7) $\frac{6}{9} + \frac{7}{27}$
8) $\frac{1}{10} + \frac{1}{3}$

Set 4

1) $\frac{7}{9} + \frac{4}{27}$
2) $\frac{8}{11} + \frac{1}{22}$
3) $\frac{1}{3} + \frac{2}{12}$
4) $\frac{7}{18} + \frac{8}{9}$
5) $\frac{10}{18} + \frac{3}{9}$
6) $\frac{5}{21} + \frac{5}{7}$
7) $\frac{2}{10} + \frac{2}{4}$
8) $\frac{11}{26} + \frac{8}{13}$

Subtracting proper fractions

1) Convert both fractions to have the same denominator
2) Subtract the numerators, but not the denominators.
3) Simplify the answer if you can



Set 1

1) $\frac{8}{10} - \frac{10}{20}$
2) $\frac{7}{11} - \frac{10}{22}$
3) $\frac{5}{6} - \frac{3}{10}$
4) $\frac{4}{5} - \frac{1}{30}$
5) $\frac{9}{21} - \frac{1}{7}$
6) $\frac{2}{4} - \frac{4}{16}$
7) $\frac{7}{28} - \frac{2}{14}$
8) $\frac{2}{8} - \frac{1}{16}$

Set 2

1) $\frac{10}{27} - \frac{2}{9}$
2) $\frac{8}{9} - \frac{1}{3}$
3) $\frac{1}{4} - \frac{1}{8}$
4) $\frac{5}{6} - \frac{2}{4}$
5) $\frac{5}{11} - \frac{4}{22}$
6) $\frac{4}{5} - \frac{2}{4}$
7) $\frac{4}{7} - \frac{3}{14}$
8) $\frac{4}{11} - \frac{2}{22}$

Set 3

1) $\frac{8}{11} - \frac{3}{22}$
2) $\frac{9}{11} - \frac{7}{22}$
3) $\frac{7}{9} - \frac{2}{3}$
4) $\frac{7}{28} - \frac{1}{7}$
5) $\frac{10}{14} - \frac{1}{7}$
6) $\frac{4}{5} - \frac{2}{4}$
7) $\frac{2}{4} - \frac{1}{3}$
8) $\frac{7}{9} - \frac{12}{27}$

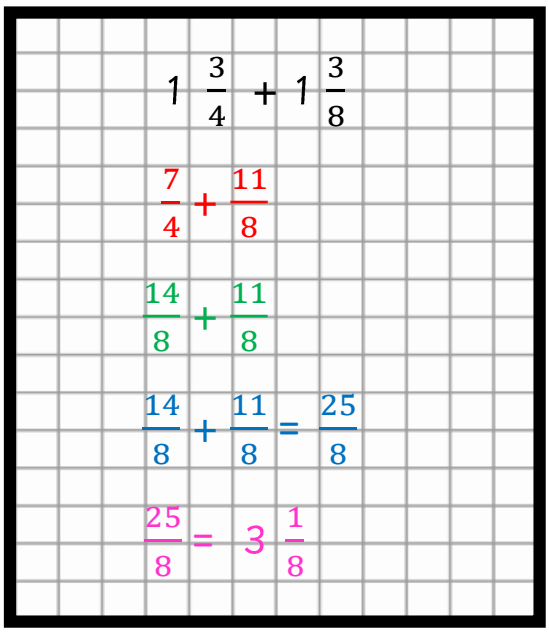
Set 4

1) $\frac{6}{13} - \frac{7}{26}$
2) $\frac{8}{16} - \frac{1}{8}$
3) $\frac{6}{16} - \frac{1}{4}$
4) $\frac{3}{4} - \frac{3}{14}$
5) $\frac{4}{9} - \frac{12}{27}$
6) $\frac{4}{12} - \frac{1}{4}$
7) $\frac{4}{11} - \frac{1}{22}$
8) $\frac{4}{9} - \frac{9}{27}$

Adding mixed numbers

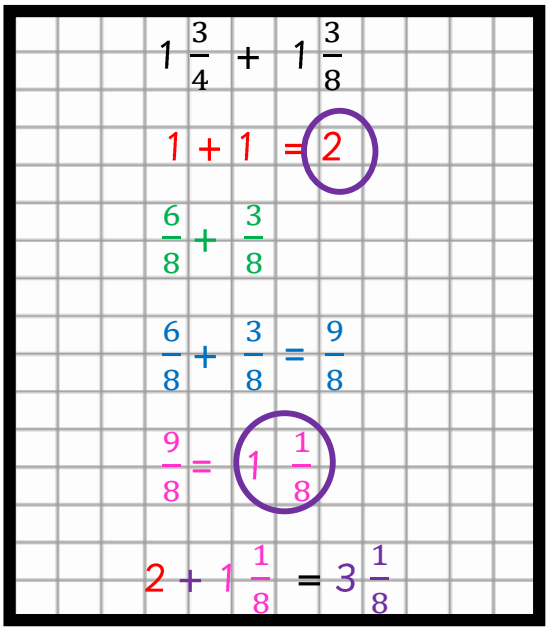
Method 1

1) Change any mixed numbers to improper fractions.
2) Convert both fractions to have the same denominator
3) Add the numerators together.
4) Change any improper fractions back to mixed numbers
5) Simplify the answer if you can.



Method 2

1) Add the two whole numbers together.
2) Convert both fractions to have the same denominator.
3) Add the numerators together.
4) Change any improper fractions back to mixed numbers
5) Add together your two answers.
6) Simplify the answer if you can.



Adding mixed numbers

Set 1

1) $4\frac{1}{2} + 6\frac{1}{4}$

2) $4\frac{1}{2} + 5\frac{2}{3}$

3) $3\frac{1}{5} + 7\frac{2}{3}$

4) $3\frac{2}{4} + 5\frac{8}{10}$

5) $1\frac{2}{3} + 8\frac{1}{2}$

6) $5\frac{1}{4} + 8\frac{2}{3}$

7) $4\frac{3}{4} + 5\frac{5}{10}$

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

Set 2

1) $2\frac{1}{2} + 4\frac{1}{3}$

2) $1\frac{4}{5} + 5\frac{2}{3}$

3) $5\frac{2}{5} + 5\frac{2}{3}$

4) $3\frac{1}{10} + 8\frac{1}{4}$

5) $1\frac{3}{5} + 8\frac{3}{4}$

6) $5\frac{5}{10} + 9\frac{1}{2}$

7) $6\frac{1}{2} + 9\frac{1}{3}$

8) $1\frac{2}{3} + 8\frac{1}{2}$

Set 3

1) $6\frac{4}{5} + 8\frac{3}{4}$

2) $1\frac{1}{2} + 9\frac{4}{5}$

3) $6\frac{3}{10} + 8\frac{1}{2}$

4) $5\frac{7}{10} + 9\frac{3}{4}$

5) $2\frac{1}{5} + 9\frac{3}{4}$

6) $4\frac{1}{3} + 6\frac{8}{10}$

7) $6\frac{2}{4} + 9\frac{8}{10}$

8) $2\frac{3}{4} + 5\frac{1}{10}$

Set 4

1) $4\frac{2}{10} + 6\frac{3}{5}$

2) $5\frac{7}{10} + 9\frac{1}{2}$

3) $6\frac{1}{4} + 4\frac{6}{10}$

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

5) $1\frac{1}{3} + 6\frac{1}{4}$

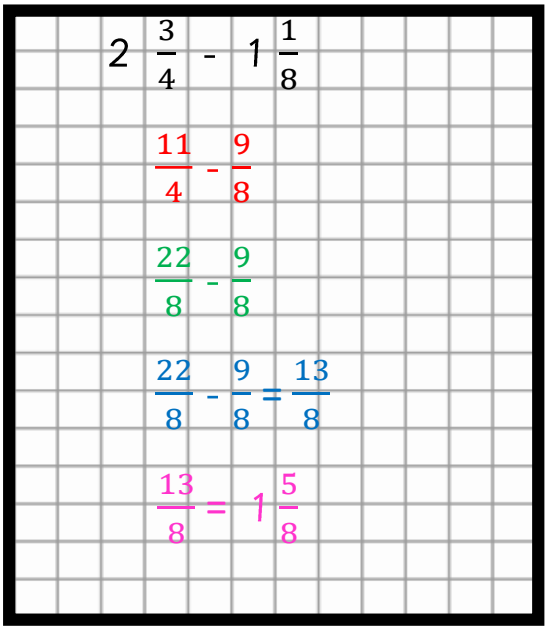
6) $3\frac{2}{10} + 5\frac{1}{4}$

7) $1\frac{1}{4} + 8\frac{3}{5}$

8) $3\frac{1}{2} + 5\frac{3}{4}$

Subtracting mixed numbers

1) Change any mixed numbers to improper fractions.
2) Convert both fractions to have the same denominator.
3) Subtract the second numerator from the first.
4) Change any improper fractions back to mixed numbers.
5) Simplify the answer if you can.



Set 1

1) $8\frac{1}{2} - 2\frac{8}{10}$
2) $5\frac{1}{3} - 4\frac{1}{2}$
3) $7\frac{2}{4} - 3\frac{7}{10}$
4) $7\frac{1}{5} - 3\frac{3}{4}$
5) $5\frac{1}{10} - 4\frac{1}{5}$
6) $9\frac{1}{5} - 1\frac{4}{10}$
7) $9\frac{1}{2} - 4\frac{3}{5}$
8) $5\frac{1}{4} - 3\frac{2}{3}$

Set 2

1) $5\frac{1}{10} - 3\frac{1}{2}$
2) $6\frac{2}{10} - 2\frac{1}{2}$
3) $6\frac{1}{4} - 4\frac{3}{5}$
4) $9\frac{2}{3} - 4\frac{3}{4}$
5) $6\frac{1}{4} - 2\frac{2}{3}$
6) $6\frac{1}{4} - 4\frac{1}{2}$
7) $6\frac{1}{5} - 2\frac{2}{4}$
8) $8\frac{1}{3} - 1\frac{3}{4}$

Set 3

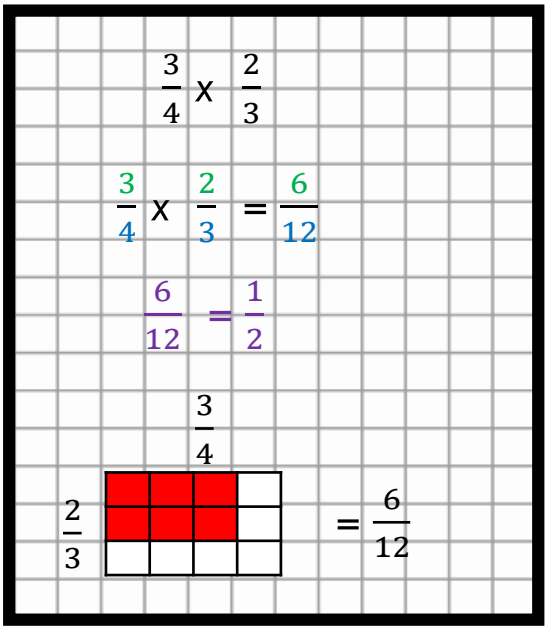
1) $8\frac{1}{3} - 1\frac{4}{5}$
2) $9\frac{1}{5} - 3\frac{3}{10}$
3) $8\frac{1}{3} - 1\frac{3}{5}$
4) $9\frac{1}{3} - 2\frac{1}{2}$
5) $6\frac{1}{2} - 1\frac{8}{10}$
6) $9\frac{1}{3} - 2\frac{7}{10}$
7) $8\frac{1}{3} - 2\frac{4}{5}$
8) $6\frac{2}{5} - 4\frac{8}{10}$

Set 4

1) $7\frac{4}{10} - 4\frac{1}{2}$
2) $7\frac{1}{2} - 3\frac{3}{5}$
3) $8\frac{2}{4} - 2\frac{7}{10}$
4) $6\frac{3}{4} - 3\frac{8}{10}$
5) $9\frac{1}{2} - 4\frac{3}{5}$
6) $5\frac{1}{4} - 4\frac{1}{3}$
7) $6\frac{1}{2} - 2\frac{6}{10}$
8) $7\frac{1}{2} - 1\frac{2}{3}$

Multiply pairs of fractions

1) Multiply the numerators
2) Multiply the denominators
3) Simplify the answer if you can.



Set 1

1) $\frac{1}{7} \times \frac{3}{5}$

2) $\frac{7}{10} \times \frac{2}{3}$

3) $\frac{1}{3} \times \frac{1}{4}$

4) $\frac{6}{9} \times \frac{1}{2}$

5) $\frac{5}{6} \times \frac{5}{8}$

6) $\frac{1}{2} \times \frac{2}{6}$

7) $\frac{1}{2} \times \frac{3}{9}$

8) $\frac{1}{8} \times \frac{1}{2}$

Set 2

1) $\frac{2}{8} \times \frac{5}{6}$

2) $\frac{3}{4} \times \frac{2}{10}$

3) $\frac{2}{3} \times \frac{3}{8}$

4) $\frac{1}{2} \times \frac{3}{6}$

5) $\frac{2}{4} \times \frac{1}{6}$

6) $\frac{4}{7} \times \frac{4}{6}$

7) $\frac{2}{9} \times \frac{2}{3}$

8) $\frac{4}{7} \times \frac{1}{2}$

Set 3

1) $\frac{3}{20} \times \frac{6}{9}$

2) $\frac{5}{8} \times \frac{16}{20}$

3) $\frac{1}{2} \times \frac{3}{18}$

4) $\frac{1}{3} \times \frac{7}{14}$

5) $\frac{1}{2} \times \frac{1}{4}$

6) $\frac{2}{16} \times \frac{3}{4}$

7) $\frac{13}{15} \times \frac{2}{7}$

8) $\frac{2}{5} \times \frac{2}{3}$

Set 4

1) $\frac{1}{2} \times \frac{7}{9}$

2) $\frac{11}{20} \times \frac{1}{7}$

3) $\frac{12}{16} \times \frac{3}{4}$

4) $\frac{1}{18} \times \frac{1}{5}$

5) $\frac{16}{20} \times \frac{2}{3}$

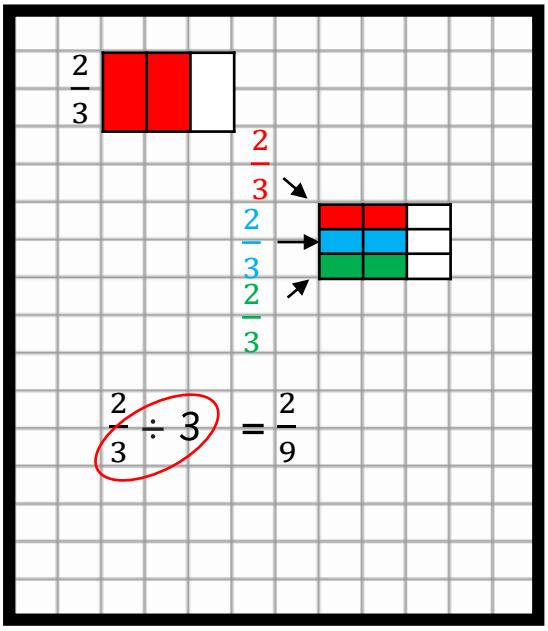
6) $\frac{2}{4} \times \frac{2}{7}$

7) $\frac{3}{4} \times \frac{1}{3}$

8) $\frac{2}{6} \times \frac{3}{4}$

Divide fractions by whole numbers

1) Multiply the denominator by the whole number and write the answer as the new denominator.
2) Simplify the answer if you can.



Set 1

1) $\frac{2}{7} \div 5$
2) $\frac{1}{3} \div 2$
3) $\frac{2}{5} \div 3$
4) $\frac{1}{6} \div 3$
5) $\frac{3}{8} \div 2$
6) $\frac{2}{3} \div 5$
7) $\frac{1}{5} \div 3$
8) $\frac{3}{5} \div 2$

Set 2

1) $\frac{2}{5} \div 5$
2) $\frac{2}{3} \div 4$
3) $\frac{1}{6} \div 2$
4) $\frac{2}{5} \div 7$
5) $\frac{3}{7} \div 5$
6) $\frac{2}{9} \div 4$
7) $\frac{2}{5} \div 3$
8) $\frac{1}{5} \div 6$

Set 3

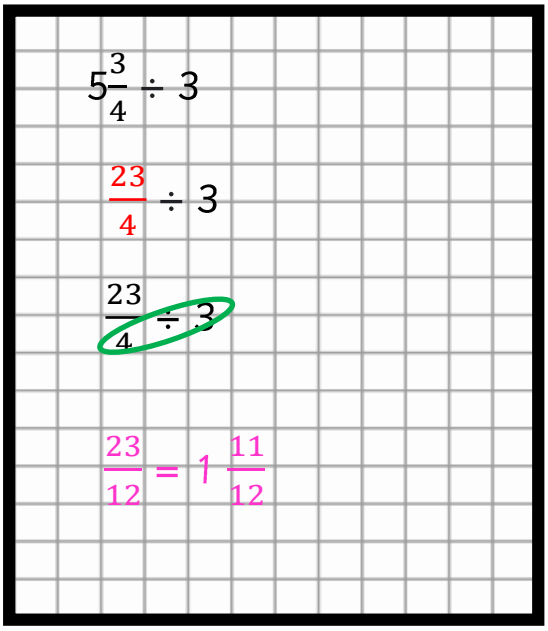
1) $\frac{2}{7} \div 3$
2) $\frac{1}{3} \div 3$
3) $\frac{1}{5} \div 5$
4) $\frac{1}{8} \div 5$
5) $\frac{3}{7} \div 7$
6) $\frac{2}{3} \div 5$
7) $\frac{1}{5} \div 3$
8) $\frac{3}{5} \div 2$

Set 4

1) $\frac{2}{7} \div 3$
2) $\frac{1}{3} \div 2$
3) $\frac{1}{5} \div 6$
4) $\frac{2}{8} \div 5$
5) $\frac{3}{7} \div 4$
6) $\frac{2}{3} \div 6$
7) $\frac{2}{5} \div 3$
8) $\frac{1}{5} \div 4$

Divide mixed numbers by whole numbers

1) Change any mixed numbers to improper fractions.
2) Multiply the denominator by the whole number and write the answer as the new denominator.
3) Change any improper fractions back to mixed numbers.
4) Simplify the answer if you can.



Set 1

1) $3\frac{2}{5} \div 5$
2) $1\frac{2}{3} \div 4$
3) $3\frac{1}{6} \div 2$
4) $4\frac{2}{5} \div 7$
5) $2\frac{3}{7} \div 5$
6) $3\frac{2}{9} \div 4$
7) $1\frac{2}{5} \div 3$
8) $3\frac{1}{5} \div 6$

Set 2

1) $2\frac{2}{7} \div 3$
2) $3\frac{1}{3} \div 2$
3) $3\frac{1}{5} \div 6$
4) $1\frac{2}{8} \div 5$
5) $2\frac{3}{7} \div 4$
6) $2\frac{2}{3} \div 6$
7) $5\frac{2}{5} \div 3$
8) $3\frac{1}{5} \div 4$

Set 3

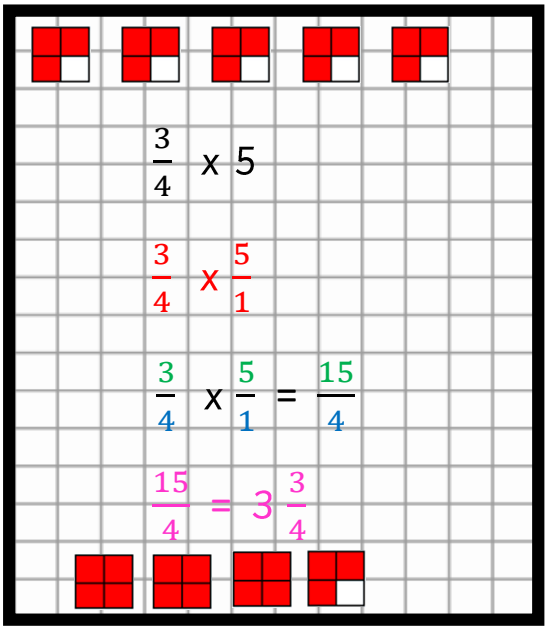
1) $4\frac{2}{7} \div 3$
2) $3\frac{1}{3} \div 3$
3) $4\frac{1}{5} \div 5$
4) $2\frac{1}{8} \div 5$
5) $3\frac{3}{7} \div 7$
6) $1\frac{2}{3} \div 5$
7) $2\frac{1}{5} \div 3$
8) $3\frac{3}{5} \div 2$

Set 4

1) $2\frac{2}{7} \div 5$
2) $6\frac{1}{3} \div 2$
3) $4\frac{2}{5} \div 3$
4) $4\frac{1}{6} \div 3$
5) $3\frac{3}{8} \div 2$
6) $8\frac{2}{3} \div 5$
7) $4\frac{1}{5} \div 3$
8) $6\frac{3}{5} \div 2$

Multiply fractions by whole numbers

1) Write the whole number as a fraction over 1.
2) Multiply the numerators
3) Multiply the denominators
4) Change any improper fractions back to mixed numbers
5) Simplify the answer if you can



Set 1

1) $\frac{1}{2}$ x 4
2) $\frac{1}{3}$ x 3
3) $\frac{1}{3}$ x 5
4) $\frac{1}{6}$ x 5
5) $\frac{1}{4}$ x 3
6) $\frac{1}{8}$ x 3
7) $\frac{1}{5}$ x 2
8) $\frac{1}{2}$ x 2

Set 2

1) $\frac{1}{4}$ x 4
2) $\frac{1}{2}$ x 3
3) $\frac{1}{2}$ x 6
4) $\frac{1}{8}$ x 9
5) $\frac{1}{3}$ x 7
6) $\frac{1}{10}$ x 7
7) $\frac{1}{4}$ x 9
8) $\frac{1}{8}$ x 5

Set 3

1) $\frac{1}{5}$ x 12
2) $\frac{1}{6}$ x 6
3) $\frac{1}{4}$ x 8
4) $\frac{1}{9}$ x 12
5) $\frac{1}{2}$ x 7
6) $\frac{2}{3}$ x 8
7) $\frac{2}{3}$ x 4
8) $\frac{5}{6}$ x 9

Set 4

1) $\frac{2}{3}$ x 4
2) $\frac{5}{6}$ x 9
3) $\frac{3}{4}$ x 5
4) $\frac{5}{8}$ x4
5) $\frac{3}{5}$ x 3
6) $\frac{1}{2}$ x 6
7) $\frac{2}{4}$ x 6
8) $\frac{4}{8}$ x 7

Multiply mixed numbers by whole numbers

Method 1

1) Change any mixed numbers to improper fractions
2) Write the whole number as a fraction over 1.
3) Multiply the numerators
4) Multiply the denominators
5) Change any improper fractions back to mixed numbers.
6) Simplify the answer if you can.

$3\frac{3}{4} \times 5$

$\frac{15}{4} \times 5$

$\frac{15}{4} \times \frac{5}{1}$

$\frac{15}{4} \times \frac{5}{1} = \frac{75}{4}$

$\frac{75}{4} = 18\frac{3}{4}$

Method 2

1) Multiply the two whole numbers together.
2) Multiply the fraction by the whole number.
3) Change any improper fractions back to mixed numbers.
4) Add your two answers together.
5) Simplify the answer if you can.

$3\frac{3}{4} \times 5$

$3 \times 5 = 15$

$\frac{3}{4} \times \frac{5}{1} = \frac{15}{4}$

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

$15 + 3\frac{3}{4} = 18\frac{3}{4}$

Multiply mixed numbers by whole numbers

Set 1

1) $4\frac{1}{2} \times 2$
2) $4\frac{1}{2} \times 3$
3) $3\frac{1}{5} \times 4$
4) $3\frac{2}{4} \times 3$
5) $1\frac{2}{3} \times 5$
6) $5\frac{1}{4} \times 2$
7) $4\frac{3}{4} \times 3$
8) $3\frac{1}{2} \times 2$

Set 2

1) $2\frac{1}{2} \times 6$
2) $1\frac{4}{5} \times 8$
3) $5\frac{2}{5} \times 3$
4) $3\frac{1}{10} \times 4$
5) $1\frac{3}{5} \times 8$
6) $5\frac{5}{10} \times 4$
7) $5\frac{1}{2} \times 2$
8) $1\frac{2}{3} \times 5$

Set 3

1) $6\frac{4}{5} \times 2$
2) $1\frac{1}{2} \times 5$
3) $6\frac{3}{10} \times 3$
4) $5\frac{7}{10} \times 3$
5) $2\frac{1}{5} \times 6$
6) $4\frac{1}{3} \times 5$
7) $6\frac{2}{4} \times 4$
8) $2\frac{3}{4} \times 8$

Set 4

1) $4\frac{2}{10} \times 3$
2) $5\frac{7}{10} \times 2$
3) $6\frac{1}{4} \times 4$
4) $1\frac{2}{4} \times 8$
5) $1\frac{1}{3} \times 6$
6) $3\frac{2}{10} \times 7$
7) $1\frac{1}{4} \times 10$
8) $3\frac{1}{2} \times 3$

Match the pairs of equivalent fractions

$\frac{24}{36}$ $\frac{9}{12}$ $\frac{3}{4}$ $\frac{7}{8}$ $\frac{21}{24}$ $\frac{32}{56}$ $\frac{15}{27}$ $\frac{2}{3}$ $\frac{6}{12}$ $\frac{9}{12}$ $\frac{8}{14}$ $\frac{10}{18}$ $\frac{9}{18}$ $\frac{9}{12}$

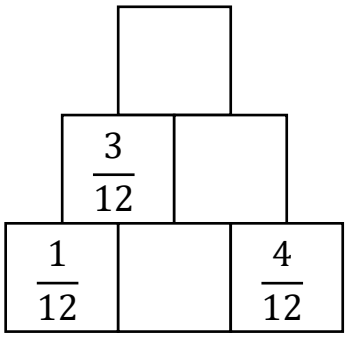
Match the pairs of equivalent fractions

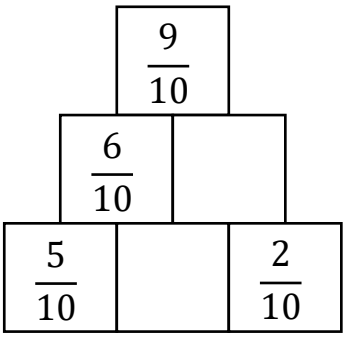
$\frac{9}{2}$ $\frac{28}{5}$ $\frac{15}{4}$ $\frac{11}{4}$ $2\frac{2}{5}$ $6\frac{1}{2}$ $3\frac{4}{5}$ $4\frac{1}{2}$ $8\frac{1}{2}$ $2\frac{3}{4}$ $3\frac{3}{4}$ $\frac{12}{5}$ $\frac{19}{5}$ $5\frac{3}{5}$ $\frac{26}{4}$ $\frac{17}{2}$

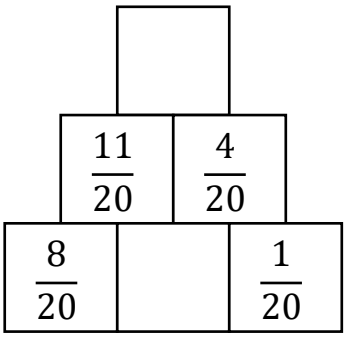
Follow the maze of fractions equivalent to $\frac{3}{5}$

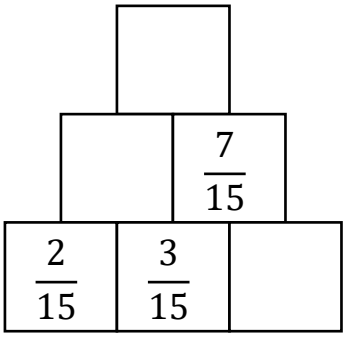
start									
	$\frac{3}{5}$	$\frac{6}{10}$	$\frac{12}{20}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{7}{10}$	$\frac{11}{55}$	$\frac{2}{4}$	$\frac{5}{9}$	$\frac{3}{10}$
	$\frac{3}{6}$	$\frac{1}{3}$	$\frac{15}{25}$	$\frac{6}{5}$	$\frac{3}{6}$	$\frac{12}{20}$	$\frac{30}{50}$	$\frac{3}{5}$	$\frac{2}{5}$	$\frac{3}{12}$
	$\frac{6}{12}$	$\frac{3}{5}$	$\frac{30}{50}$	$\frac{21}{35}$	$\frac{3}{5}$	$\frac{6}{10}$	$\frac{4}{5}$	$\frac{24}{40}$	$\frac{3}{9}$	$\frac{2}{5}$
	$\frac{3}{5}$	$\frac{4}{9}$	$\frac{5}{3}$	$\frac{24}{40}$	$\frac{6}{10}$	$\frac{27}{45}$	$\frac{36}{60}$	$\frac{33}{55}$	$\frac{300}{500}$	$\frac{6}{5}$
	$\frac{6}{18}$	$\frac{24}{40}$	$\frac{2}{4}$	$\frac{12}{20}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{5}{9}$	$\frac{6}{9}$	$\frac{18}{30}$	$\frac{6}{10}$
	$\frac{15}{25}$	$\frac{30}{50}$	$\frac{6}{5}$	$\frac{18}{30}$	$\frac{3}{6}$	$\frac{7}{9}$	$\frac{6}{11}$	$\frac{6}{10}$	$\frac{9}{15}$	$\frac{3}{4}$
	$\frac{3}{5}$	$\frac{21}{35}$	$\frac{18}{24}$	$\frac{9}{15}$	$\frac{6}{11}$	$\frac{36}{60}$	$\frac{2}{3}$	$\frac{30}{55}$	$\frac{60}{100}$	$\frac{210}{350}$
	$\frac{3}{6}$	$\frac{5}{3}$	$\frac{33}{45}$	$\frac{300}{500}$	$\frac{9}{15}$	$\frac{3}{7}$	$\frac{9}{5}$	$\frac{3}{15}$	$\frac{3}{5}$	end

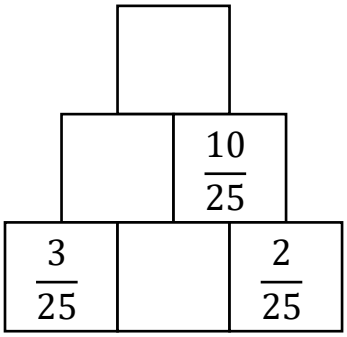
Here are some fraction pyramids. The fraction in each box is the sum of the two fractions below it. Add in the missing numbers.

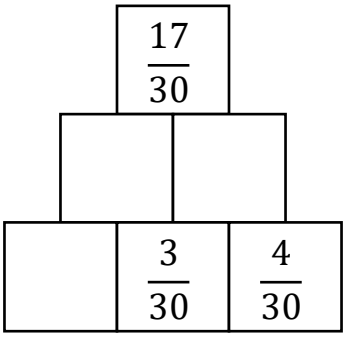




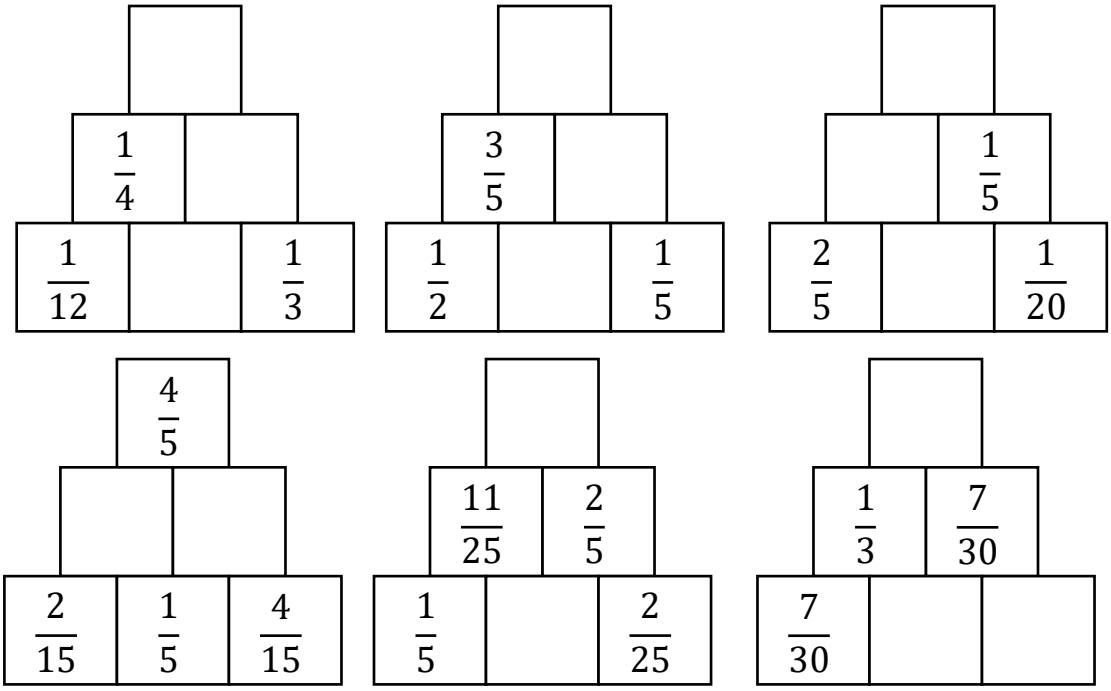






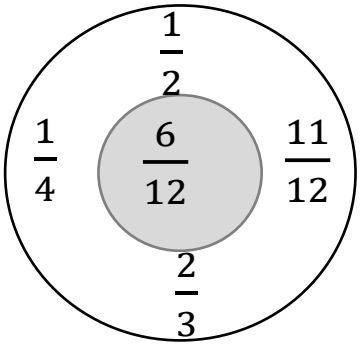


Here are some fraction pyramids. The fraction in each box is the sum of the two fractions below it. Add in the missing numbers.

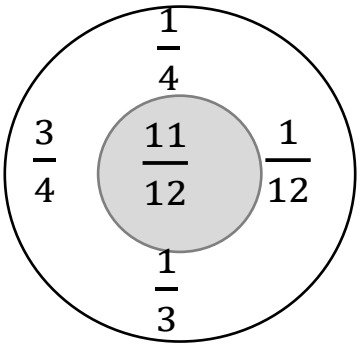


The number in the middle of each circle can be found by adding 3 of the other fractions and subtracting the fourth

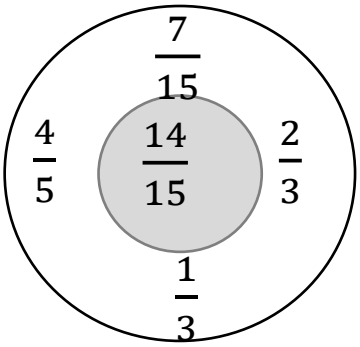
1)



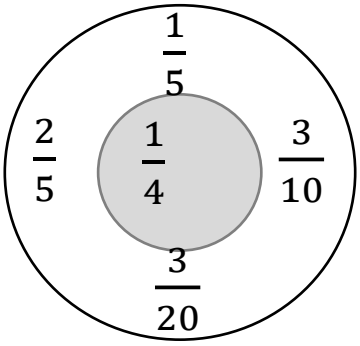
2)



3)

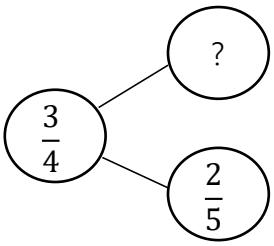
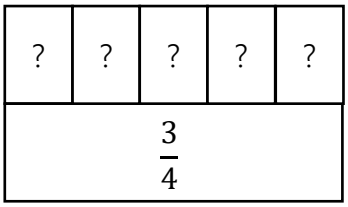
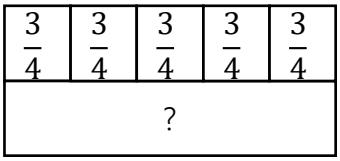
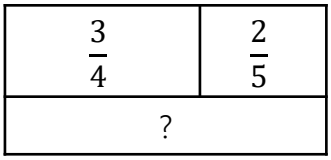
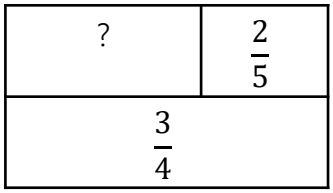
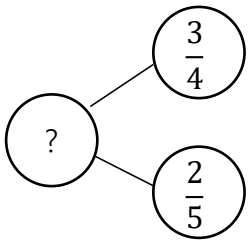


4)

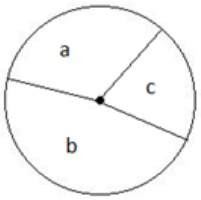
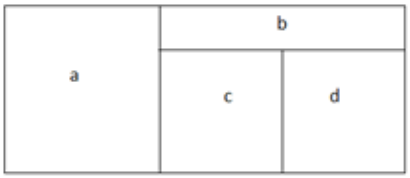
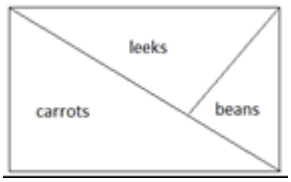


Each of these problems matches one of these 5 answers. Match the questions to the correct answers

$\frac{3}{4} + \frac{2}{5} = 1\frac{3}{20}$	$\frac{3}{4} - \frac{2}{5} = \frac{7}{20}$	$\frac{3}{4} \times \frac{2}{5} = \frac{6}{20}$	$\frac{3}{4} \div 5 = \frac{3}{20}$	$\frac{3}{4} \times 5 = \frac{15}{4}$

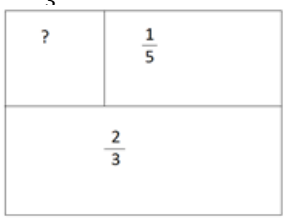
Lucy has $\frac{3}{4}$ of a cake and she gives $\frac{2}{5}$ of it to Jessie. How much does Lucy now have?	Mason has run $\frac{3}{4}$ of a mile and Ellie has run $\frac{2}{5}$ of a mile more. How far has Ellie run?	Kate drinks $\frac{3}{4}$ of a bottle of juice. Mike drinks $\frac{2}{5}$ of an identical bottle of juice. How much more does Kate drink than Mike?
A car drives $\frac{3}{4}$ km. A lorry drives $\frac{2}{5}$ times as far as the car. How far does the lorry drive?	Molly runs $\frac{3}{4}$ of mile. Luca runs 5 times as far. How far does Luca run?	A stack of 5 pieces of card is $\frac{3}{4}$ of an inch thick. How thick would one piece of card be?
A chocolate bar is $\frac{3}{4}$ of an inch thick. How thick would a stack of 5 bars be?	A box is $\frac{3}{4}$ full of sand. A child removes $\frac{2}{5}$ of it. How much of the box is left?	Lila and Cameron have two identical pizzas. Lila eats $\frac{3}{4}$ of hers and Cameron eats $\frac{2}{5}$ of his. What fraction of the pizzas have they eaten altogether?
		
		

Mixed fraction problem solving

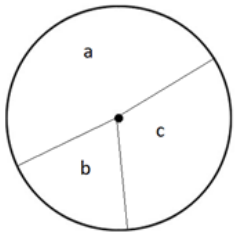
Jack has 100 toys. He gives $\frac{7}{20}$ of them to his sister and $\frac{3}{10}$ of them to his brother. How many does he have left?	Jake weighs out 14 grams of flour. He then weighs out $9\frac{1}{5}$ times as much sugar. How much sugar does he use?
Section a is $\frac{2}{5}$ of the circle and section b is 49%. What percentage of the circle is section c? 	Section a $\frac{3}{8}$ is and section b is $\frac{1}{16}$. Sections c and d are exactly the same size. How big is section d? 
Amy spends $\frac{3}{7}$ of her money on a book. She has £28 left. How much did she spend on the book?	A biscuit mix weighs 450g. $\frac{3}{5}$ of the mix is sugar, 16% is chocolate chips and the rest is flour. How much of each ingredient is required?
A stack of 8 bars of chocolate is $9\frac{3}{5}$ cm thick. How thick would one bar be?	Laura has $\frac{2}{3}$ jug of lemonade, $\frac{8}{15}$ jug of orange juice and $\frac{3}{5}$ jug of cranberry juice. She mixes them all together to make a new drink and then divides it evenly between the three jugs. How much of each jug is full?
A stack of 7 books is sitting on a table. The table is $90\frac{3}{5}$ cm tall. One book is $4\frac{3}{5}$ thick. What is the total height of the table and the books?	4 pieces of string measure $2\frac{2}{5}$ cm, $1\frac{1}{10}$ cm, $1\frac{1}{2}$ cm and 2.5 cm. What is the mean length of the pieces of string?
A car drives $\frac{4}{5}$ km. A lorry drives $3\frac{1}{3}$ times as far as the car. What is the total distance that both vehicles travelled?	A shop is having a 25% of sale. Max picks up a game that originally cost £40. When he gets to the till, he gets a further $\frac{2}{5}$ off after the 25% discount. How much does he pay in total?
A gardener divides up his garden like this: The beans take up $\frac{1}{5}$ of the total garden. How much space do the leeks take up? 	A jug contains $2\frac{3}{4}$ litres of water. Marie pours $1\frac{1}{2}$ L away and then divides the amount left equally between 5 cups. How much will go into each cup?

Mixed fraction problem solving (2)

Callie plants blue flowers in $\frac{2}{3}$ of her garden and red flowers in $\frac{1}{5}$ of her garden. In the rest of the space, she plants grass. What fraction of her garden will be grass?



In this circle, the section marked b is $\frac{1}{8}$. Section c is 3 times as big as section b. What fraction of the circle is section c?



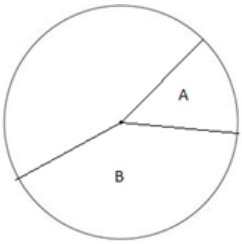
Jason runs 5 km. Lisa runs $2\frac{1}{2}$ times as far as Jason. How far does Lisa run?

After a party, Sophie has $3\frac{2}{5}$ bottles of lemonade left over. She shares it with her 3 sisters. How much of a bottle of lemonade will each of them get?

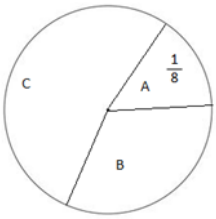
Dictionaries are $7\frac{1}{4}$ cm thick. How thick would a stack of 25 dictionaries be?

A shop sells $3\frac{1}{2}$ kg of potatoes and $2\frac{1}{5}$ times as much flour. How much flour is sold?

Section A is $\frac{1}{8}$ of the circle. Section B is $3\frac{1}{4}$ as big as section A. How big is? section B?



Section A is $\frac{1}{8}$ of the circle. Section B is 3 times as big as section A.
a) How big is section B?
b) How big is section C?



A stack of 5 books is $12\frac{3}{4}$ cm thick. How thick would one book be?

A jug contains $\frac{3}{4}$ of a litre of squash. After you pour out $\frac{5}{8}$ of a litre, how much is left?

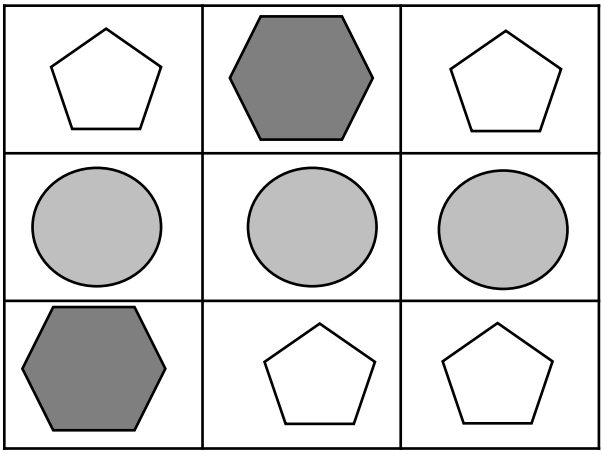
Lisa walks $\frac{5}{8}$ of a mile. She then had a rest and walked for $1\frac{3}{4}$ of a mile. How far did she walk in total?

Monica jogs for $2\frac{3}{5}$ km. Simon jogs for $\frac{3}{4}$ km. How much further does Monica jog than Simon?

A buttercup has a stem that is 26 mm long. A sunflower has a stem that is $14\frac{1}{5}$ times as long. How long is the sunflower stem?

A length of rope is $3\frac{3}{5}$ m long. If it is cut into 5 equal sections, how long will each section be?

Find the missing total



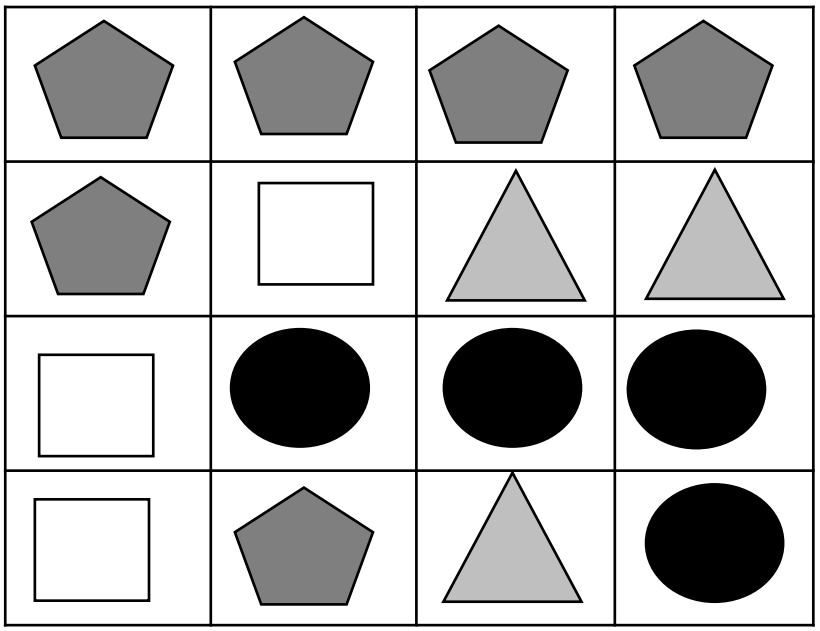
$\frac{5}{8}$

$\frac{3}{8}$

1

? $\frac{1}{2}$ $\frac{5}{8}$

Find the missing total



$\frac{4}{8}$

$2\frac{5}{8}$

$2\frac{1}{4}$

?

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

Follow the maze of fractions that have been written in their simplest form

start									
	$\frac{3}{5}$	$\frac{3}{6}$	$\frac{11}{77}$	$\frac{2}{9}$	$\frac{3}{9}$	$\frac{2}{4}$	$\frac{9}{18}$	$\frac{6}{12}$	$\frac{11}{17}$	$\frac{2}{7}$
	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{17}{19}$	$\frac{1}{5}$	$\frac{3}{7}$	$\frac{2}{15}$	$\frac{4}{8}$	$\frac{4}{9}$	$\frac{3}{5}$	$\frac{3}{5}$
	$\frac{2}{12}$	$\frac{6}{9}$	$\frac{4}{11}$	$\frac{2}{7}$	$\frac{2}{6}$	$\frac{4}{12}$	$\frac{33}{55}$	$\frac{6}{8}$	$\frac{2}{3}$	$\frac{4}{12}$
	$\frac{4}{5}$	$\frac{3}{66}$	$\frac{8}{24}$	$\frac{8}{9}$	$\frac{2}{3}$	$\frac{4}{5}$	$\frac{1}{5}$	$\frac{2}{3}$	$\frac{4}{5}$	$\frac{1}{8}$
	$\frac{3}{7}$	$\frac{4}{27}$	$\frac{2}{9}$	$\frac{4}{11}$	$\frac{3}{9}$	$\frac{6}{18}$	$\frac{9}{13}$	$\frac{4}{8}$	$\frac{2}{4}$	$\frac{3}{14}$
	$\frac{2}{99}$	$\frac{2}{4}$	$\frac{8}{16}$	$\frac{7}{21}$	$\frac{7}{11}$	$\frac{2}{12}$	$\frac{2}{7}$	$\frac{9}{11}$	$\frac{9}{99}$	$\frac{2}{39}$
	$\frac{5}{19}$	$\frac{4}{6}$	$\frac{3}{21}$	$\frac{7}{14}$	$\frac{15}{16}$	$\frac{3}{19}$	$\frac{4}{13}$	$\frac{4}{108}$	$\frac{3}{19}$	$\frac{3}{14}$
	$\frac{1}{21}$	$\frac{3}{10}$	$\frac{6}{7}$	$\frac{2}{51}$	$\frac{3}{17}$	$\frac{4}{24}$	$\frac{6}{11}$	$\frac{3}{12}$	$\frac{5}{15}$	end

Add fractions with the same denominators- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{8}{12}$	1) $\frac{10}{12}$	1) $\frac{10}{11}$	1) $\frac{10}{11}$
2) $\frac{2}{4}$	2) $\frac{7}{11}$	2) $\frac{5}{10}$	2) $\frac{6}{11}$
3) $\frac{9}{11}$	3) $\frac{6}{10}$	3) $\frac{3}{7}$	3) $\frac{11}{12}$
4) $\frac{8}{12}$	4) $\frac{4}{7}$	4) $\frac{8}{9}$	4) $\frac{2}{7}$
5) $\frac{5}{6}$	5) $\frac{7}{9}$	5) $\frac{9}{12}$	5) $\frac{4}{10}$
6) $\frac{2}{3}$	6) $\frac{2}{10}$	6) $\frac{2}{9}$	6) $\frac{2}{6}$
7) $\frac{8}{9}$	7) $\frac{2}{3}$	7) $\frac{2}{6}$	7) $\frac{5}{8}$
8) $\frac{7}{8}$	8) $\frac{11}{12}$	8) $\frac{4}{11}$	8) $\frac{4}{10}$

Subtract fractions with the same denominators- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{1}{12}$	1) $\frac{1}{10}$	1) $\frac{4}{12}$	1) $\frac{1}{4}$
2) $\frac{6}{10}$	2) $\frac{1}{12}$	2) $\frac{3}{8}$	2) $\frac{1}{10}$
3) $\frac{4}{11}$	3) $\frac{3}{9}$	3) $\frac{3}{11}$	3) $\frac{5}{12}$
4) $\frac{2}{11}$	4) $\frac{2}{12}$	4) $\frac{1}{10}$	4) $\frac{1}{3}$
5) $\frac{1}{7}$	5) $\frac{2}{11}$	5) $\frac{9}{12}$	5) $\frac{1}{6}$
6) $\frac{5}{10}$	6) $\frac{1}{4}$	6) $\frac{6}{12}$	6) $\frac{1}{12}$
7) $\frac{1}{3}$	7) $\frac{1}{12}$	7) $\frac{1}{6}$	7) $\frac{1}{5}$
8) $\frac{3}{9}$	8) $\frac{2}{11}$	8) $\frac{1}{11}$	8) $\frac{3}{10}$

Find fractions of numbers- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) 63	1) 20	1) 9	1) 63
2) 39	2) 42	2) 11	2) 24
3) 13	3) 80	3) 50	3) 120
4) 35	4) 140	4) 25	4) 100
5) 50	5) 50	5) 150	5) 18
6) 10	6) 42	6) 95	6) 24
7) 75	7) 20	7) 20	7) 20
8) 10	8) 8	8) 40	8) 57

Finding the whole number from a fraction- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) 48	1) 27	1) 30	1) 56
2) 30	2) 20	2) 28	2) 21
3) 27	3) 18	3) 45	3) 35
4) 24	4) 56	4) 84	4) 96
5) 48	5) 60	5) 50	5) 55
6) 40	6) 35	6) 49	6) 28
7) 12	7) 20	7) 15	7) 50
8) 18	8) 22	8) 132	8) 22

Using common factors to simplify fractions- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{1}{3}$	1) $\frac{1}{2}$	1) $\frac{1}{4}$	1) $\frac{1}{2}$
2) $\frac{3}{5}$	2) $\frac{2}{3}$	2) $\frac{1}{3}$	2) $\frac{3}{4}$
3) $\frac{1}{3}$	3) $\frac{1}{4}$	3) $\frac{2}{3}$	3) $\frac{1}{6}$
4) $\frac{1}{2}$	4) $\frac{1}{6}$	4) $\frac{2}{5}$	4) $\frac{1}{6}$
5) $\frac{1}{2}$	5) $\frac{1}{4}$	5) $\frac{1}{4}$	5) $\frac{1}{3}$
6) $\frac{1}{3}$	6) $\frac{1}{2}$	6) $\frac{2}{3}$	6) $\frac{1}{2}$
7) $\frac{3}{4}$	7) $\frac{1}{5}$	7) $\frac{1}{3}$	7) $\frac{1}{2}$
8) $\frac{1}{3}$	8) $\frac{2}{3}$	8) $\frac{3}{5}$	8) $\frac{2}{5}$

Use multiples to express fractions in the same denominator- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{1}{12}=\frac{2}{24}$	1) $\frac{3}{9}=\frac{1}{3}$	1) $\frac{3}{8}=\frac{6}{16}$	1) $\frac{4}{11}=\frac{8}{22}$
2) $\frac{3}{5}=\frac{9}{15}$	2) $\frac{6}{36}=\frac{1}{6}$	2) $\frac{33}{36}=\frac{11}{1}$	2) $\frac{9}{10}=\frac{90}{100}$
3) $\frac{8}{24}=\frac{4}{12}$	3) $\frac{2}{3}=\frac{8}{12}$	3) $\frac{2}{5}=\frac{8}{20}$	3) $\frac{8}{22}=\frac{4}{11}$
4) $\frac{3}{10}=\frac{12}{40}$	4) $\frac{5}{8}=\frac{10}{16}$	4) $\frac{6}{7}=\frac{24}{28}$	4) $\frac{5}{10}=\frac{1}{2}$
5) $\frac{7}{8}=\frac{21}{24}$	5) $\frac{11}{12}=\frac{132}{144}$	5) $\frac{40}{48}=\frac{5}{6}$	5) $\frac{7}{9}=\frac{21}{27}$
6) $\frac{11}{15}=\frac{22}{30}$	6) $\frac{8}{12}=\frac{4}{6}$	6) $\frac{1}{9}=\frac{5}{45}$	6) $\frac{8}{32}=\frac{4}{16}$
7) $\frac{30}{36}=\frac{5}{6}$	7) $\frac{9}{18}=\frac{1}{2}$	7) $\frac{2}{11}=\frac{12}{66}$	7) $\frac{7}{11}=\frac{21}{33}$
8) $\frac{3}{4}=\frac{9}{12}$	8) $\frac{5}{6}=\frac{20}{24}$	8) $\frac{5}{10}=\frac{3}{30}$	8) $\frac{3}{8}=\frac{6}{16}$

Convert mixed numbers to improper fractions ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $5\frac{5}{6}=\frac{35}{6}$	1) $3\frac{3}{5}=\frac{18}{5}$	1) $8\frac{3}{5}=\frac{43}{5}$	1) $4\frac{1}{3}=\frac{13}{3}$
2) $4\frac{1}{4}=\frac{17}{4}$	2) $6\frac{3}{5}=\frac{33}{5}$	2) $3\frac{1}{3}=\frac{10}{3}$	2) $5\frac{1}{2}=\frac{11}{2}$
3) $3\frac{3}{5}=\frac{18}{5}$	3) $6\frac{3}{4}=\frac{27}{4}$	3) $9\frac{4}{9}=\frac{85}{9}$	3) $8\frac{1}{6}=\frac{49}{6}$
4) $6\frac{1}{2}=\frac{13}{2}$	4) $4\frac{3}{5}=\frac{23}{5}$	4) $2\frac{2}{3}=\frac{8}{3}$	4) $4\frac{1}{2}=\frac{9}{2}$
5) $3\frac{2}{3}=\frac{11}{3}$	5) $6\frac{1}{6}=\frac{37}{6}$	5) $3\frac{9}{10}=\frac{39}{10}$	5) $4\frac{3}{5}=\frac{23}{5}$
6) $4\frac{2}{7}=\frac{30}{7}$	6) $9\frac{6}{7}=\frac{69}{7}$	6) $6\frac{3}{5}=\frac{33}{5}$	6) $7\frac{1}{2}=\frac{15}{2}$
7) $3\frac{3}{5}=\frac{18}{5}$	7) $8\frac{3}{5}=\frac{43}{5}$	7) $3\frac{1}{4}=\frac{13}{3}$	7) $3\frac{7}{9}=\frac{34}{9}$
8) $6\frac{3}{5}=\frac{33}{5}$	8) $7\frac{2}{3}=\frac{23}{3}$	8) $7\frac{1}{3}=\frac{22}{3}$	8) $9\frac{2}{3}=\frac{29}{3}$

Convert improper fractions to mixed numbers-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{37}{10}=3\frac{7}{10}$	1) $\frac{49}{10}=4\frac{9}{10}$	1) $\frac{20}{6}=3\frac{2}{6}$	1) $\frac{48}{10}=4\frac{8}{10}$
2) $\frac{26}{9}=2\frac{8}{9}$	2) $\frac{16}{5}=3\frac{1}{5}$	2) $\frac{7}{2}=3\frac{1}{2}$	2) $\frac{50}{8}=6\frac{1}{4}$
3) $\frac{36}{7}=5\frac{1}{7}$	3) $\frac{33}{7}=4\frac{5}{7}$	3) $\frac{9}{2}=4\frac{1}{2}$	3) $\frac{15}{2}=7\frac{1}{2}$
4) $\frac{59}{8}=7\frac{3}{8}$	4) $\frac{15}{2}=7\frac{1}{2}$	4) $\frac{27}{4}=6\frac{3}{4}$	4) $\frac{53}{9}=5\frac{8}{9}$
5) $\frac{17}{3}=5\frac{2}{3}$	5) $\frac{21}{6}=3\frac{3}{6}$	5) $\frac{14}{3}=4\frac{2}{3}$	5) $\frac{21}{4}=5\frac{1}{4}$
6) $\frac{37}{6}=6\frac{1}{6}$	6) $\frac{54}{8}=6\frac{6}{8}$	6) $\frac{27}{8}=3\frac{3}{8}$	6) $\frac{22}{8}=2\frac{3}{4}$
7) $\frac{53}{3}=6\frac{5}{8}$	7) $\frac{45}{7}=6\frac{3}{7}$	7) $\frac{36}{7}=5\frac{1}{7}$	7) $\frac{23}{3}=7\frac{2}{3}$
8) $\frac{17}{7}=2\frac{3}{7}$	8) $\frac{14}{5}=2\frac{4}{5}$	8) $\frac{27}{5}=5\frac{2}{5}$	8) $\frac{40}{7}=5\frac{5}{7}$

Comparing fractions-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{7}{9} > \frac{4}{27}$	1) $\frac{9}{26} > \frac{2}{13}$	1) $\frac{9}{27} < \frac{8}{9}$	1) $\frac{3}{28} < \frac{5}{7}$
2) $\frac{8}{11} > \frac{1}{22}$	2) $\frac{4}{7} > \frac{1}{4}$	2) $\frac{3}{4} > \frac{3}{6}$	2) $\frac{8}{20} > \frac{1}{4}$
3) $\frac{1}{3} > \frac{2}{12}$	3) $\frac{10}{20} < \frac{8}{10}$	3) $\frac{2}{3} = \frac{4}{6}$	3) $\frac{2}{9} < \frac{2}{6}$
4) $\frac{7}{18} < \frac{8}{9}$	4) $\frac{2}{11} < \frac{11}{22}$	4) $\frac{4}{21} < \frac{5}{7}$	4) $\frac{2}{7} < \frac{9}{14}$
5) $\frac{10}{18} > \frac{3}{9}$	5) $\frac{6}{15} > \frac{3}{30}$	5) $\frac{8}{13} > \frac{9}{26}$	5) $\frac{8}{20} = \frac{2}{5}$
6) $\frac{5}{21} < \frac{5}{7}$	6) $\frac{2}{3} < \frac{10}{12}$	6) $\frac{9}{16} < \frac{2}{4}$	6) $\frac{10}{14} < \frac{6}{7}$
7) $\frac{2}{10} < \frac{2}{4}$	7) $\frac{6}{9} > \frac{7}{27}$	7) $\frac{3}{6} > \frac{3}{18}$	7) $\frac{1}{5} < \frac{3}{10}$
8) $\frac{11}{26} < \frac{8}{13}$	8) $\frac{1}{10} < \frac{1}{3}$	8) $\frac{1}{5} < \frac{5}{20}$	8) $\frac{4}{9} > \frac{9}{27}$

Ordering fractions -ANSWERS

Set 1	Set 2
$\frac{1}{3}$ $\frac{5}{12}$ $\frac{3}{4}$ $\frac{5}{6}$	$\frac{2}{15}$ $\frac{1}{3}$ $\frac{2}{3}$ $\frac{3}{5}$
Set 3	**Set 4**
$\frac{15}{16}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{3}{8}$	$\frac{19}{20}$ $\frac{4}{5}$ $\frac{11}{10}$ $\frac{1}{4}$

Adding proper fractions-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $1\frac{2}{9}$	1) $\frac{23}{28}$	1) $\frac{1}{2}$	1) $\frac{25}{27}$
2) $1\frac{1}{4}$	2) $\frac{13}{20}$	2) $\frac{9}{14}$	2) $\frac{17}{22}$
3) $1\frac{1}{3}$	3) $\frac{5}{9}$	3) $1\frac{3}{10}$	3) $\frac{1}{2}$
4) $\frac{19}{21}$	4) $\frac{13}{14}$	4) $\frac{15}{22}$	4) $1\frac{5}{18}$
5) $\frac{25}{26}$	5) $\frac{4}{5}$	5) $\frac{1}{2}$	5) $\frac{8}{9}$
6) $1\frac{1}{16}$	6) $1\frac{4}{7}$	6) $1\frac{1}{2}$	6) $\frac{20}{21}$
7) $\frac{2}{3}$	7) $\frac{1}{2}$	7) $\frac{25}{27}$	7) $\frac{7}{10}$
8) $1\frac{3}{28}$	8) $\frac{7}{9}$	8) $\frac{13}{30}$	8) $1\frac{1}{26}$

Subtracting proper fractions-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{3}{10}$	1) $\frac{4}{27}$	1) $\frac{13}{22}$	1) $\frac{5}{26}$
2) $\frac{2}{11}$	2) $\frac{5}{9}$	2) $\frac{1}{2}$	2) $\frac{3}{8}$
3) $\frac{8}{15}$	3) $\frac{5}{9}$	3) $\frac{1}{9}$	3) $\frac{1}{8}$
4) $\frac{23}{30}$	4) $\frac{1}{3}$	4) $\frac{3}{28}$	4) $\frac{15}{28}$
5) $\frac{2}{7}$	5) $\frac{3}{11}$	5) $\frac{4}{7}$	5) 0
6) $\frac{1}{4}$	6) $\frac{3}{10}$	6) $\frac{3}{10}$	6) $\frac{1}{12}$
7) $\frac{3}{28}$	7) $\frac{5}{14}$	7) $\frac{1}{6}$	7) $\frac{7}{22}$
8) $\frac{3}{16}$	8) $\frac{3}{11}$	8) $\frac{1}{3}$	8) $\frac{1}{9}$

Adding mixed numbers-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $10\frac{3}{4}$	1) $6\frac{5}{6}$	1) $15\frac{11}{20}$	1) $10\frac{4}{5}$
2) $10\frac{1}{6}$	2) $11\frac{2}{15}$	2) $11\frac{3}{10}$	2) $15\frac{1}{5}$
3) $4\frac{1}{2}$	3) $11\frac{1}{5}$	3) $14\frac{4}{5}$	3) $10\frac{17}{20}$
4) $9\frac{3}{10}$	4) $11\frac{7}{20}$	4) $15\frac{9}{20}$	4) $9\frac{5}{6}$
5) $10\frac{1}{6}$	5) $10\frac{7}{20}$	5) $11\frac{19}{20}$	5) $7\frac{7}{12}$
6) $13\frac{11}{12}$	6) 15	6) $11\frac{2}{15}$	6) $8\frac{9}{20}$
7) $10\frac{1}{4}$	7) $15\frac{5}{6}$	7) $16\frac{3}{10}$	7) $9\frac{17}{20}$
8) $7\frac{5}{6}$	8) $10\frac{1}{6}$	8) $7\frac{17}{20}$	8) $9\frac{1}{4}$

Subtracting mixed numbers-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $5\frac{7}{10}$	1) $1\frac{3}{5}$	1) $6\frac{8}{15}$	1) $2\frac{9}{10}$
2) $\frac{5}{6}$	2) $3\frac{7}{10}$	2) $5\frac{9}{10}$	2) $3\frac{9}{10}$
3) $3\frac{4}{5}$	3) $1\frac{13}{20}$	3) $6\frac{11}{15}$	3) $5\frac{4}{5}$
4) $3\frac{9}{20}$	4) $4\frac{11}{12}$	4) $6\frac{5}{6}$	4) $2\frac{19}{20}$
5) $\frac{9}{10}$	5) $3\frac{7}{12}$	5) $4\frac{7}{10}$	5) $4\frac{9}{10}$
6) $7\frac{4}{5}$	6) $1\frac{3}{4}$	6) $6\frac{19}{30}$	6) $\frac{11}{12}$
7) $4\frac{9}{10}$	7) $3\frac{7}{10}$	7) $5\frac{8}{15}$	7) $3\frac{9}{10}$
8) $1\frac{7}{12}$	8) $6\frac{7}{12}$	8) $1\frac{3}{5}$	8) $5\frac{5}{6}$

Multiplying pairs of fractions-ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{3}{35}$	1) $\frac{10}{48}$	1) $\frac{18}{180}$ or $\frac{1}{10}$	1) $\frac{7}{18}$
2) $\frac{14}{30}$	2) $\frac{6}{40}$	2) $\frac{80}{160}$ or $\frac{1}{2}$	2) $\frac{11}{140}$
3) $\frac{1}{12}$	3) $\frac{6}{24}$	3) $\frac{3}{36}$ or $\frac{1}{12}$	3) $\frac{36}{64}$ or $\frac{9}{16}$
4) $\frac{6}{18}$	4) $\frac{3}{12}$	4) $\frac{7}{42}$ or $\frac{1}{6}$	4) $\frac{1}{90}$
5) $\frac{25}{48}$	5) $\frac{2}{24}$	5) $\frac{1}{8}$	5) $\frac{32}{60}$ or $\frac{8}{15}$
6) $\frac{2}{12}$	6) $\frac{16}{42}$	6) $\frac{6}{64}$ or $\frac{3}{32}$	6) $\frac{4}{28}$ or $\frac{1}{7}$
7) $\frac{3}{18}$	7) $\frac{4}{27}$	7) $\frac{26}{105}$	7) $\frac{3}{12}$ or $\frac{1}{4}$
8) $\frac{1}{6}$	8) $\frac{4}{14}$	8) $\frac{4}{15}$	8) $\frac{6}{24}$ or $\frac{1}{4}$

Dividing fractions by whole numbers -ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{2}{35}$	1) $\frac{2}{25}$	1) $\frac{2}{21}$	1) $\frac{2}{21}$
2) $\frac{1}{6}$	2) $\frac{2}{12}$	2) $\frac{1}{9}$	2) $\frac{1}{6}$
3) $\frac{2}{15}$	3) $\frac{1}{12}$	3) $\frac{1}{25}$	3) $\frac{1}{30}$
4) $\frac{1}{18}$	4) $\frac{2}{35}$	4) $\frac{1}{40}$	4) $\frac{2}{40}$
5) $\frac{3}{16}$	5) $\frac{3}{35}$	5) $\frac{3}{49}$	5) $\frac{3}{28}$
6) $\frac{2}{15}$	6) $\frac{2}{36}$	6) $\frac{2}{15}$	6) $\frac{2}{18}$
7) $\frac{1}{15}$	7) $\frac{2}{15}$	7) $\frac{1}{15}$	7) $\frac{2}{15}$
8) $\frac{3}{10}$	8) $\frac{1}{30}$	8) $\frac{3}{10}$	8) $\frac{1}{20}$

Dividing mixed numbers by whole numbers -ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{17}{25}$	1) $\frac{16}{21}$	1) $\frac{30}{21}$	1) $\frac{16}{35}$
2) $\frac{5}{12}$	2) $\frac{10}{6}$	2) $\frac{10}{9}$	2) $\frac{19}{6}$
3) $\frac{19}{12}$	3) $\frac{16}{30}$	3) $\frac{21}{20}$	3) $\frac{22}{15}$
4) $\frac{22}{35}$	4) $\frac{10}{40}$	4) $\frac{17}{40}$	4) $\frac{25}{28}$
5) $\frac{17}{35}$	5) $\frac{17}{28}$	5) $\frac{24}{49}$	5) $\frac{27}{16}$
6) $\frac{29}{36}$	6) $\frac{8}{18}$	6) $\frac{5}{15}$	6) $\frac{26}{15}$
7) $\frac{7}{9}$	7) $\frac{27}{15}$	7) $\frac{11}{15}$	7) $\frac{21}{15}$
8) $\frac{16}{30}$	8) $\frac{16}{20}$	8) $\frac{18}{10}$	8) $\frac{33}{10}$

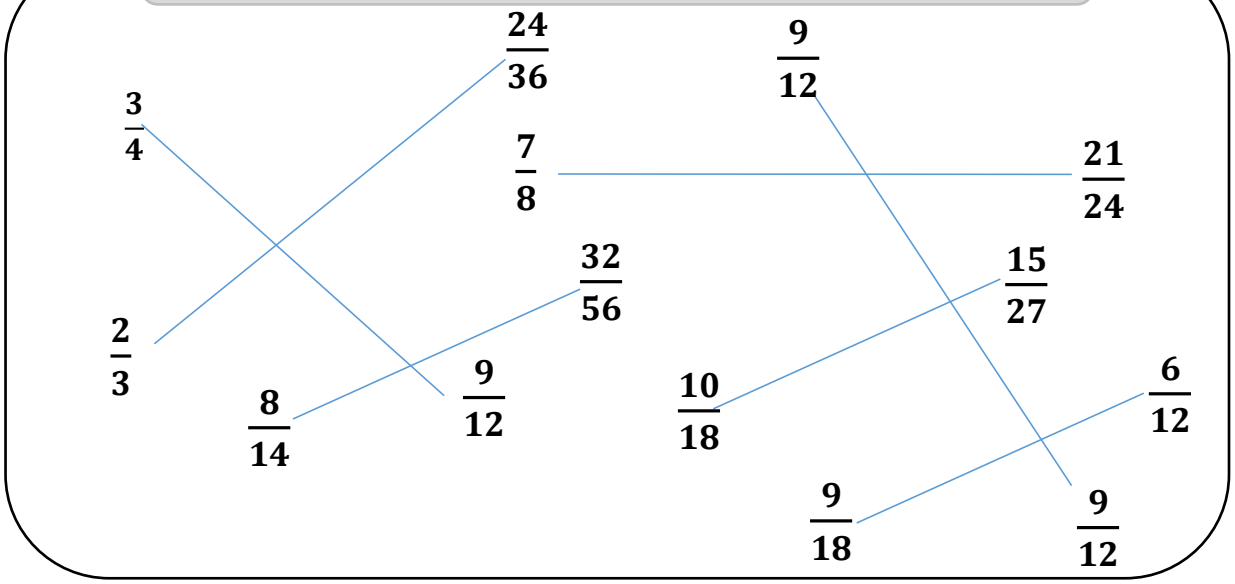
Multiplying fractions by whole numbers- ANSWERS

Set 1	Set 2	Set 3	Set 4
1) $\frac{4}{2}$ or 2	1) $\frac{4}{4}$ or 1	1) $\frac{12}{5}$ or $2\frac{2}{5}$	1) $\frac{8}{3}$ or $2\frac{2}{3}$
2) $\frac{3}{3}$ or 1	2) $\frac{3}{2}$ or $1\frac{1}{2}$	2) $\frac{6}{6}$ or 1	2) $\frac{45}{6}$ or $7\frac{1}{2}$
3) $\frac{5}{3}$ or $1\frac{2}{3}$	3) $\frac{6}{2}$ or 3	3) $\frac{8}{4}$ or 2	3) $\frac{15}{4}$ or $3\frac{3}{4}$
4) $\frac{5}{6}$	4) $\frac{9}{8}$ or $1\frac{1}{8}$	4) $\frac{12}{9}$ or $1\frac{1}{3}$	4) $\frac{20}{8}$or $2\frac{1}{2}$
5) $\frac{3}{4}$	5) $\frac{7}{3}$ or $2\frac{1}{3}$	5) $\frac{7}{2}$ or $3\frac{1}{2}$	5) $\frac{9}{5}$ or $1\frac{4}{5}$
6) $\frac{3}{8}$	6) $\frac{7}{10}$	6) $\frac{16}{3}$ or $5\frac{1}{3}$	6) $\frac{6}{2}$ or 3
7) $\frac{2}{5}$	7) $\frac{9}{4}$ or $2\frac{1}{4}$	7) $\frac{8}{3}$ or $2\frac{2}{3}$	7) $\frac{12}{4}$ o 3
8) $\frac{2}{2}$ or 1	8) $\frac{5}{8}$	8) $\frac{45}{6}$ or $7\frac{1}{2}$	8) $\frac{28}{8}$ or $3\frac{1}{2}$

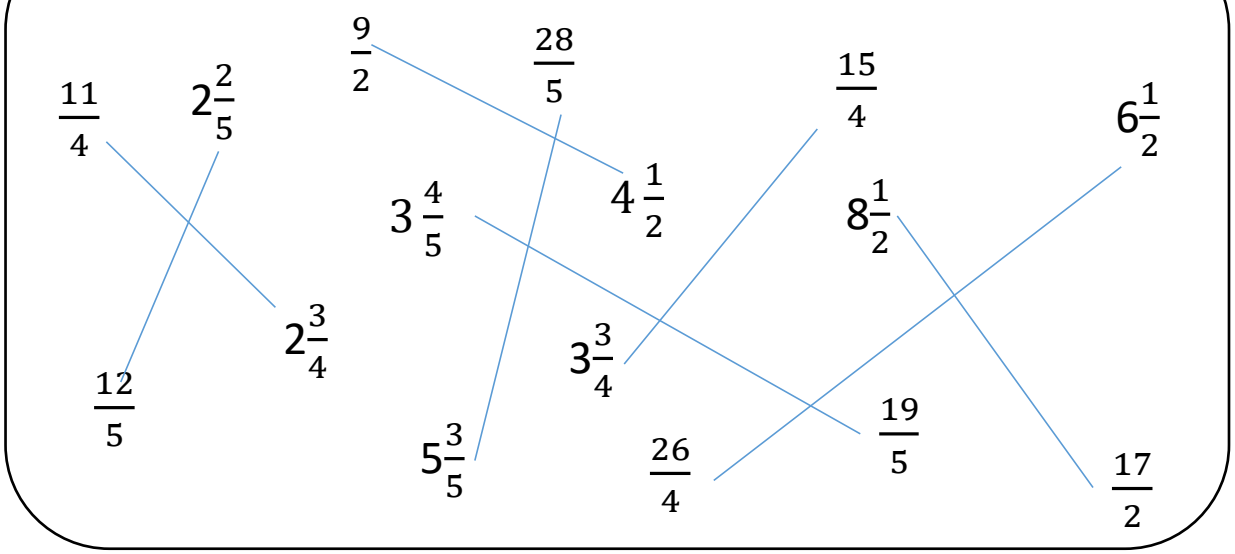
Multiplying mixed numbers by whole numbers ANSWERS

Set 1	Set 2	Set 3	Set 4
1) 9	1) 13	1) $13\frac{3}{5}$	1) $12\frac{6}{10}$
2) $13\frac{1}{2}$	2) $14\frac{2}{5}$	2) $7\frac{1}{2}$	2) $11\frac{4}{10}$
3) $12\frac{4}{5}$	3) $16\frac{1}{5}$	3) $18\frac{3}{10}$	3) 25
4) $10\frac{2}{4}$	4) $7\frac{4}{10}$	4) $17\frac{1}{10}$	4) 12
5) $8\frac{1}{3}$	5) $12\frac{4}{5}$	5) $13\frac{1}{5}$	5) 8
6) $10\frac{2}{4}$	6) 22	6) $21\frac{2}{3}$	6) $22\frac{2}{5}$
7) $14\frac{1}{4}$	7) 11	7) 26	7) $12\frac{1}{2}$
8) 7	8) $8\frac{1}{3}$	8) 22	8) $10\frac{1}{2}$

Match the pairs of equivalent fractions



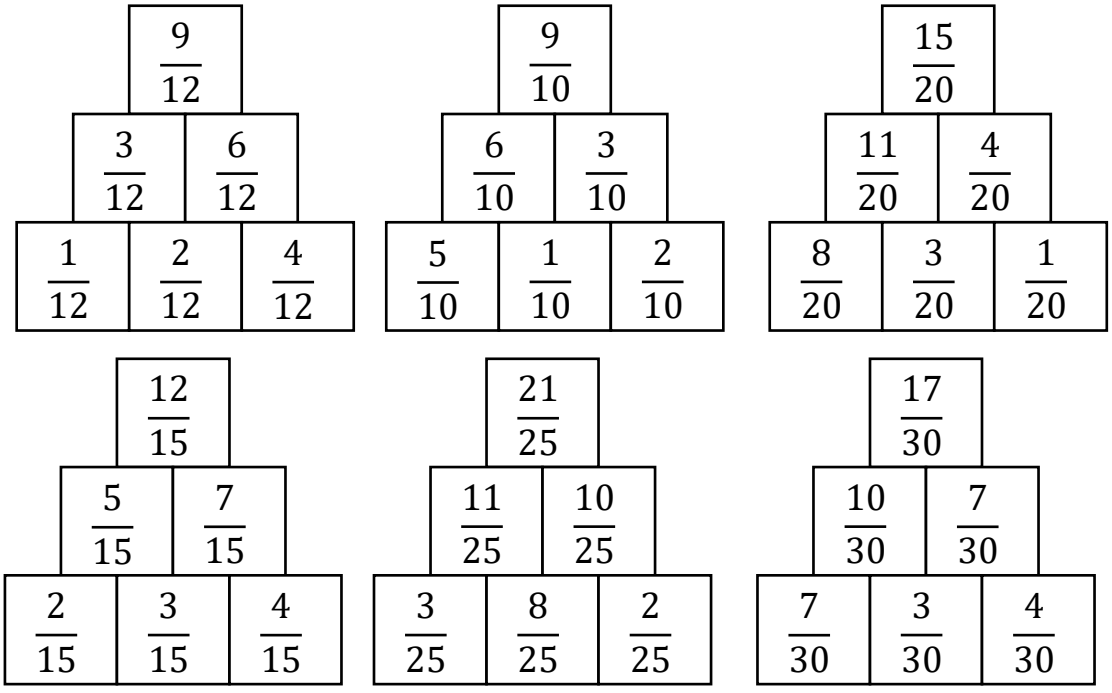
Match the pairs of equivalent fractions



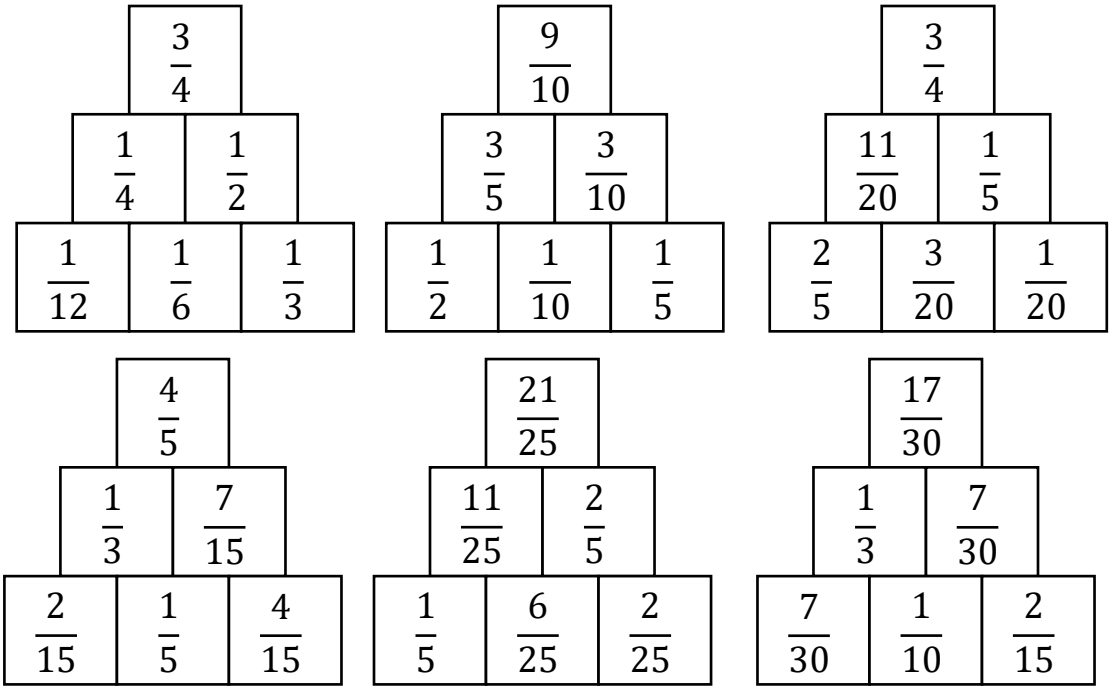
Follow the maze of fractions equivalent to $\frac{3}{5}$

start	$\frac{3}{5}$	$\frac{6}{10}$	$\frac{12}{20}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{7}{10}$	$\frac{11}{55}$	$\frac{2}{4}$	$\frac{5}{9}$	$\frac{3}{10}$
	$\frac{3}{6}$	$\frac{1}{3}$	$\frac{15}{25}$	$\frac{6}{5}$	$\frac{3}{6}$	$\frac{12}{20}$	$\frac{30}{50}$	$\frac{3}{5}$	$\frac{2}{5}$	$\frac{3}{12}$
	$\frac{6}{12}$	$\frac{3}{5}$	$\frac{30}{50}$	$\frac{21}{35}$	$\frac{3}{5}$	$\frac{6}{10}$	$\frac{4}{5}$	$\frac{24}{40}$	$\frac{3}{9}$	$\frac{2}{5}$
	$\frac{3}{5}$	$\frac{4}{9}$	$\frac{5}{3}$	$\frac{24}{40}$	$\frac{6}{10}$	$\frac{27}{45}$	$\frac{36}{60}$	$\frac{33}{55}$	$\frac{300}{500}$	$\frac{6}{5}$
	$\frac{6}{18}$	$\frac{24}{40}$	$\frac{2}{4}$	$\frac{12}{20}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{5}{9}$	$\frac{6}{9}$	$\frac{18}{30}$	$\frac{6}{10}$
	$\frac{15}{25}$	$\frac{30}{50}$	$\frac{6}{5}$	$\frac{18}{30}$	$\frac{3}{6}$	$\frac{7}{9}$	$\frac{6}{11}$	$\frac{6}{10}$	$\frac{9}{15}$	$\frac{3}{4}$
	$\frac{3}{5}$	$\frac{21}{35}$	$\frac{18}{24}$	$\frac{9}{15}$	$\frac{6}{11}$	$\frac{36}{60}$	$\frac{2}{3}$	$\frac{30}{55}$	$\frac{60}{100}$	$\frac{210}{350}$
	$\frac{3}{6}$	$\frac{5}{3}$	$\frac{33}{45}$	$\frac{300}{500}$	$\frac{9}{15}$	$\frac{3}{7}$	$\frac{9}{5}$	$\frac{3}{15}$	$\frac{3}{5}$	end

Here are some fraction pyramids. The fraction in each box is the sum of the two fractions below it. Add in the missing numbers.



Here are some fraction pyramids. The fraction in each box is the sum of the two fractions below it. Add in the missing numbers.



The number in the middle of each circle can be found by adding 3 of the other fractions and subtracting the fourth

1) $\frac{1}{4} + \frac{1}{2} + \frac{2}{3} = \frac{17}{12}$. Subtract $\frac{11}{12}$ to make $\frac{6}{12}$

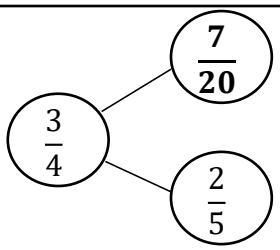
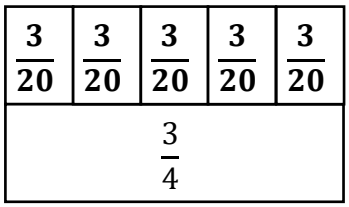
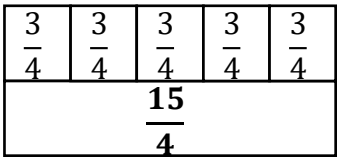
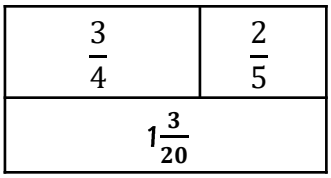
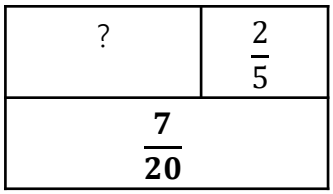
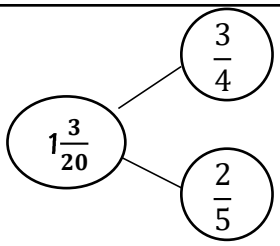
2) $\frac{3}{4} + \frac{1}{12} + \frac{4}{12} = \frac{14}{12}$. Subtract $\frac{1}{4}$ to make $\frac{11}{12}$

3) $\frac{1}{3} + \frac{4}{5} + \frac{7}{15} = \frac{24}{15}$. Subtract $\frac{2}{3}$ to make $\frac{14}{15}$

4) $\frac{1}{5} + \frac{3}{10} + \frac{3}{20} = \frac{13}{20}$. Subtract $\frac{2}{5}$ to make $\frac{1}{4}$

Each of these problems matches one of these 5 answers. Match the questions to the correct answers

$\frac{3}{4} + \frac{2}{5} = 1\frac{3}{20}$	$\frac{3}{4} - \frac{2}{5} = \frac{7}{20}$	$\frac{3}{4} \times \frac{2}{5} = \frac{6}{20}$	$\frac{3}{4} \div 5 = \frac{3}{20}$	$\frac{3}{4} \times 5 = \frac{15}{4}$

Lucy has $\frac{3}{4}$ of a cake and she gives $\frac{2}{5}$ of it to Jessie. How much does Lucy now have? $\frac{7}{20}$	Mason has run $\frac{3}{4}$ of a mile and Ellie has run $\frac{2}{5}$ of a mile more. How far has Ellie run? $1\frac{3}{20}$ mile	Kate drinks $\frac{3}{4}$ of a bottle of juice. Mike drinks $\frac{2}{5}$ of an identical bottle of juice. How much more does Kate drink than Mike? $\frac{7}{20}$
A car drives $\frac{3}{4}$ km. A lorry drives $\frac{2}{5}$ times as far as the car. How far does the lorry drive? $\frac{6}{20}$ km	Molly runs $\frac{3}{4}$ of mile. Luca runs 5 times as far. How far does Luca run? $\frac{15}{4}$ mile	A stack of 5 pieces of card is $\frac{3}{4}$ of an inch thick. How thick would one piece of card be? $\frac{3}{20}$ inch
A chocolate bar is $\frac{3}{4}$ of an inch thick. How thick would a stack of 5 bars be? $\frac{15}{4}$ inch	A box is $\frac{3}{4}$ full of sand. A child removes $\frac{2}{5}$ of it. How much of the box is left? $\frac{7}{20}$	Lila and Cameron have two identical pizzas. Lila eats $\frac{3}{4}$ of hers and Cameron eats $\frac{2}{5}$ of his. What fraction of the pizzas have they eaten altogether? $1\frac{3}{20}$
		
		

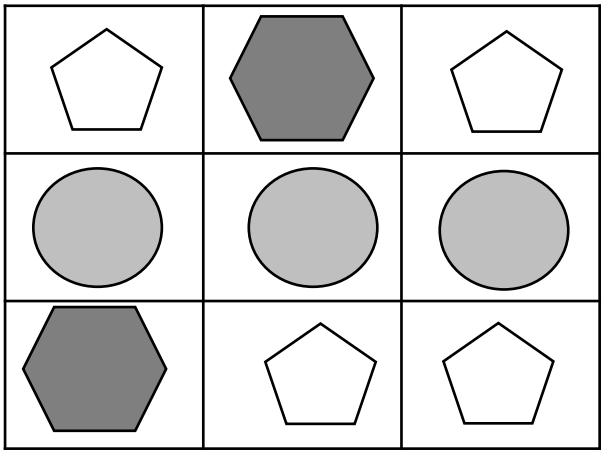
Mixed fraction problem solving

Gives 35 to his sister and 30 to his brother. He had 35 left.	128 $\frac{4}{5}$
11%	Add, then subtract from 1, then divide by 2. $\frac{9}{32}$
£21	Sugar = 270g, chocolate chips= 72g flour = 108g
1 $\frac{1}{5}$ cm or 1.2cm	Added together makes $1\frac{12}{15}$ or 1 $\frac{4}{5}$. divided by 3 = $\frac{9}{15}$ or $\frac{3}{5}$
Total of books= $32\frac{1}{5}$. Total of books and table = 122 $\frac{4}{5}$	Added together makes $\frac{75}{10}$. Divided by 4 = $\frac{75}{40}$ or 1 $\frac{35}{40}$ or 1 $\frac{7}{8}$ cm.
Lorry travelled 2 $\frac{10}{15}$. Added to the car distance is 3 $\frac{7}{15}$ km.	£18
$\frac{3}{10}$	1 $\frac{1}{4}$ L is left. Each cup will get $\frac{1}{4}$ L or 250ml.

Mixed fraction problem solving (2)

Adding then subtracting fractions 2/15	Multiplying a fraction by a whole number. 3/8
Multiplying a fraction by a whole number. 12 ½ km	Dividing a fraction by a whole number. 17/20
Multiplying a fraction by a whole number. 181 $\frac{1}{4}$ cm thick/ 181.25 cm	Multiplying pairs of fractions. 7 $\frac{7}{10}$ kg
Multiplying pairs of fractions. $\frac{13}{32}$	A) Multiplying fractions by whole number. $\frac{3}{8}$ b) Subtracting fractions $\frac{5}{8}$
Dividing fraction by whole number 2 $\frac{11}{20}$ cm	Subtracting fractions $\frac{1}{8}$
Adding fractions. 2 $\frac{3}{8}$	Subtracting fractions 1 $\frac{17}{20}$ km
Multiplying fraction by whole number. 365 $\frac{1}{5}$mm	Dividing fraction by whole numbers. $\frac{18}{25}$ or 72cm or 0.72 m

Find the missing total



$\frac{5}{8}$

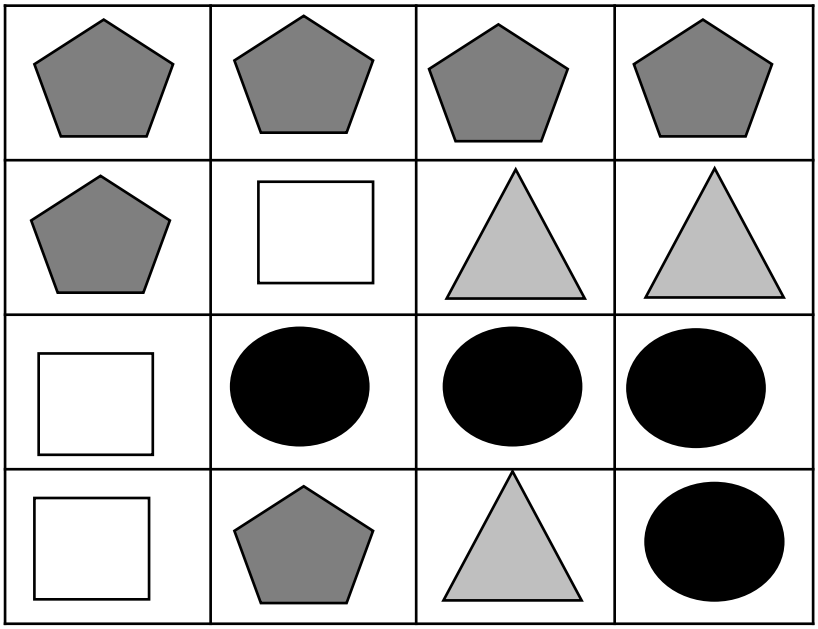
$\frac{3}{8}$

1

? $\frac{1}{2}$ $\frac{5}{8}$

Circles = $\frac{1}{8}$,
pentagons = $\frac{1}{4}$,
hexagons = $\frac{1}{2}$.
Missing total $\frac{7}{8}$

Find the missing total



$\frac{4}{8}$

$2\frac{5}{8}$

$2\frac{1}{4}$

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

? Pentagon = $\frac{1}{8}$,
square = $\frac{3}{4}$, triangle = $\frac{7}{8}$ and circle = $\frac{1}{2}$.
Missing total is $2\frac{1}{4}$

Follow the maze of fractions that have been written in their simplest form

start									
	$\frac{3}{5}$	$\frac{3}{6}$	$\frac{11}{77}$	$\frac{2}{9}$	$\frac{3}{9}$	$\frac{2}{4}$	$\frac{9}{18}$	$\frac{6}{12}$	$\frac{11}{17}$	$\frac{2}{7}$
	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{17}{19}$	$\frac{1}{5}$	$\frac{3}{7}$	$\frac{2}{15}$	$\frac{4}{8}$	$\frac{4}{9}$	$\frac{3}{5}$	$\frac{3}{5}$
	$\frac{2}{12}$	$\frac{6}{9}$	$\frac{4}{11}$	$\frac{2}{7}$	$\frac{2}{6}$	$\frac{4}{12}$	$\frac{33}{55}$	$\frac{6}{8}$	$\frac{2}{3}$	$\frac{4}{12}$
	$\frac{4}{5}$	$\frac{3}{66}$	$\frac{8}{24}$	$\frac{8}{9}$	$\frac{2}{3}$	$\frac{4}{5}$	$\frac{1}{5}$	$\frac{2}{3}$	$\frac{4}{5}$	$\frac{1}{8}$
	$\frac{3}{7}$	$\frac{4}{27}$	$\frac{2}{9}$	$\frac{4}{11}$	$\frac{3}{9}$	$\frac{6}{18}$	$\frac{9}{13}$	$\frac{4}{8}$	$\frac{2}{4}$	$\frac{3}{14}$
	$\frac{2}{99}$	$\frac{2}{4}$	$\frac{8}{16}$	$\frac{7}{21}$	$\frac{7}{11}$	$\frac{2}{12}$	$\frac{2}{7}$	$\frac{9}{11}$	$\frac{9}{99}$	$\frac{2}{39}$
	$\frac{5}{19}$	$\frac{4}{6}$	$\frac{3}{21}$	$\frac{7}{14}$	$\frac{15}{16}$	$\frac{3}{19}$	$\frac{4}{13}$	$\frac{4}{108}$	$\frac{3}{19}$	$\frac{3}{14}$
	$\frac{1}{21}$	$\frac{3}{10}$	$\frac{6}{7}$	$\frac{2}{51}$	$\frac{3}{17}$	$\frac{4}{24}$	$\frac{6}{11}$	$\frac{3}{12}$	$\frac{5}{15}$	end