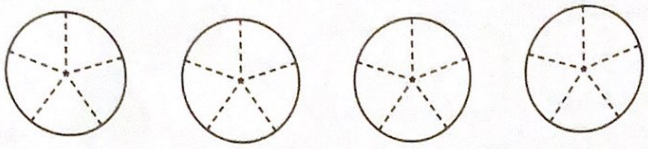
Fractions as division 1

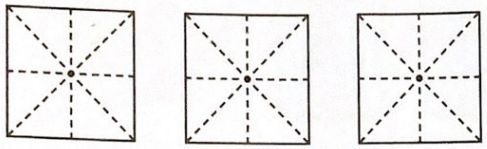
1 a) Richard has 4 cakes to share between 5 tables. How much cake is there for each table?



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

There is $\frac{4}{5}$ of a cake for each table.

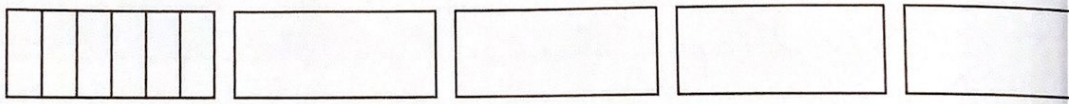
b) Isla has 3 pies to share between 8 plates. How much pie is there for each plate?



$3 \div 8 = \frac{3}{8}$

There is $\frac{3}{8}$ of a pie for each table.

c) Aki shares 5 kg strawberries between 6 bowls. What weight of strawberries is in each bowl?



$5 \div 6 = \frac{5}{6}$ There is $\frac{5}{6}$ kg of strawberries in each b

2 Complete each statement.

a) $1 \div 5 = \frac{1}{5}$

b) $2 \div 5 = \frac{2}{5}$

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

d) $3 \div 10 = \frac{3}{10}$

e) $\frac{4}{11} = 4 \div 11$

f) $8 \div 9 = \frac{8}{9}$

3 **a)** Amelia has 3 m of ribbon. She cuts it into 8 equal lengths.

How long is each length?

$3 \div 8 = \frac{3}{8}$ each length is $\frac{3}{8}$ m long.

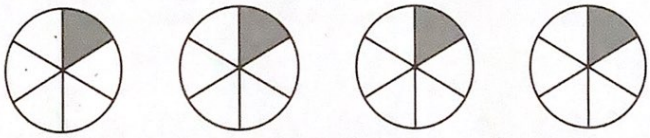
b) Ebo has 4 m of ribbon. He cuts it into 8 equal lengths.

How long is each length?

$4 \div 8 = \frac{4}{8}$ $\frac{4}{8} = \frac{1}{2}$ (÷4)

Each length is $\frac{4}{8}$ m long or $\frac{1}{2}$ m.

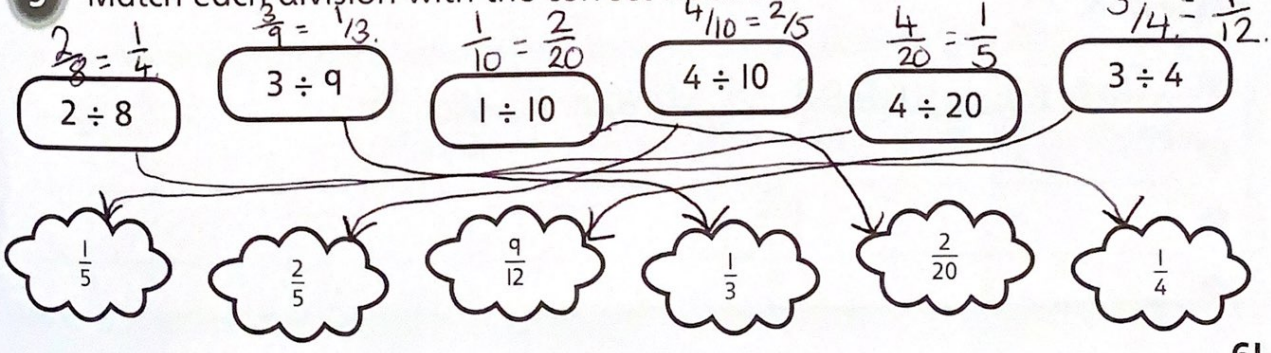
4 Emma says, 'This shows that $4 \div 6 = \frac{4}{24}$.'



Explain her mistake.

Each circle shows $\frac{1}{6}$ so her diagram shows $1 \div 6 = \frac{1}{6}$.
$4 \div 6 = \frac{4}{6}$.

5 Match each division with the correct fraction.



Multiples of 6 = 6, 12, (18), 24

Multiples of 9 = 9, (18), 27

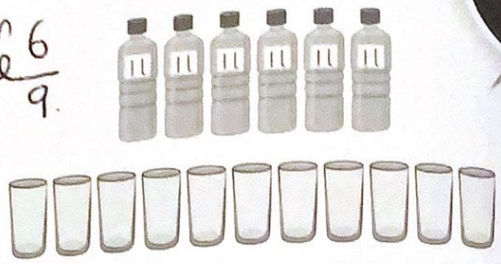
6 a) 5 litres fill 6 glasses.

$\frac{5}{6}$

18 = Lowest Common Multiple

$\frac{6}{9}$

6 litres fill 9 glasses.



Which glasses are bigger? Explain your answer fully.

$\frac{5}{6} \overset{\times 3}{=} \frac{15}{18}$ $\quad\quad$ $\frac{6}{9} \overset{\times 2}{=} \frac{12}{18}$

$\frac{15}{18} > \frac{12}{18}$ so $\frac{5}{6} > \frac{6}{9}$ so the first glasses are bigger.

b) 8 litres fill 20 red watering cans. 12 litres fill 30 blue watering cans. Which watering cans are larger?

(R) $\frac{8}{20}$ $\quad$ B $\frac{12}{30}$ $\quad\quad$ $\frac{8}{20} \overset{\div 4}{=} \frac{2}{5}$ $\quad\quad$ $\frac{12}{30} \overset{\div 6}{=} \frac{2}{5}$

Both watering cans hold 2/5 litres so they are equal in size.

Reflect

Explain the relationship between $3 \div 8$ and $\frac{3}{8}$ using what you have learnt in this lesson.

The calculation $3 \div 8$ is = to $\frac{3}{8}$.