Fractions, decimals and percentages (2)

Recognise equivalences between fractions, decimals and percentages

Challenge

1 Copy each pair of fractions, decimals or percentages writing the correct symbol between them: < or > or =.

a	$\frac{1}{2}$ 0·3	b	45% $\frac{1}{4}$	c	0·6 $\frac{7}{10}$	d	$\frac{9}{10}$ 91%
e	0·75 $\frac{7}{10}$	f	$\frac{7}{10}$ 0·65	g	55% 0·15	h	0·1 $\frac{1}{10}$
i	40% $\frac{2}{4}$	j	$\frac{6}{10}$ 0·8	k	$\frac{3}{4}$ 34%	l	20% $\frac{4}{10}$

2 Choose two of your answers from Question 1 and explain how you know your answer is correct.

3 For each set, put the fractions, decimals and percentages in order, smallest to largest.

a

$\frac{1}{2}$	0·6	55%	$\frac{1}{4}$	0·2	23%

b

0·3	0·1	1%	64%	$\frac{4}{5}$	$\frac{1}{2}$

c

$\frac{7}{10}$	0·4	35%	$\frac{1}{5}$	50%	0·6

d

$\frac{4}{5}$	$\frac{3}{10}$	0·7	61%	99%	$\frac{9}{10}$

4 Work with a partner. Each choose two different fractions, two different decimals and two different percentages from Question 3 and write them down. Work together to put them in order, smallest to largest.

Challenge

1 Copy each set of fractions, decimals or percentages, writing the correct symbol between them: < or > or =.

a	13% $\frac{1}{3}$	b	30% 0·03	c	$\frac{7}{10}$ 0·71	d	0·25 $\frac{2}{5}$
e	52% 0·5	f	$\frac{1}{5}$ 50%	g	80% $\frac{4}{5}$	h	0·14 44%
i	$\frac{8}{20}$ 0·4	j	$\frac{5}{8}$ 60%	k	0·06 $\frac{1}{20}$	l	5% 0·05
m	61% 0·66	n	0·16 $\frac{1}{6}$	o	66% 0·6	p	$\frac{8}{20}$ 40%

2 Work out each of these lengths in centimetres.

a	$\frac{8}{20}$ m	b	40% of a metre	c	0·52 m
d	$\frac{3}{5}$ m	e	$\frac{7}{10}$ m	f	16% of a metre

3 Work out each of these masses in grams.

a	34% of a kilogram	b	0·65 kg	c	$\frac{3}{8}$ kg
d	72% of a kilogram	e	0·99 kg	f	$\frac{23}{50}$ kg

4 Give an example of when it would be better to express something as a fraction rather than as a decimal or as a percentage. Explain your reasoning.
Give an example of when it would be better to express something as a percentage rather than as a decimal or as a fraction. Explain your reasoning.

Challenge 3

1 Work with a partner.

- Cut up the cards on Resource 71: Fractions, decimals and percentages.
- Using the blank cards, make up some of your own fractions, decimals and percentages.
- Put the < symbol on the table.
- Shuffle the cards and deal the cards out between you.
- The first person lays a card on one side of the < symbol.
- The second person must lay a card on the other side that is mathematically correct.
- The first person can then lay a card on top of either of the cards that are there, keeping the statement mathematically correct.
- Keep going until all the cards are used up.
- Repeat the activity, this time putting the inequalities symbol on the table so that it reads: >.

You will need:
- Resource 71: Fractions, decimals and percentages
- scissors

2 Design your own activity or game involving fractions, decimals and percentages using the cards from Resource 71.