



Find the fractions

Recognise fraction and decimal equivalences, checking equivalences using division

1 Copy and complete, writing the fractions that are equivalent to each decimal. Look carefully for any patterns or relationships between the fractions in each question.

- a $0.1 = \frac{1}{10} = \frac{1}{20} = \frac{1}{30} = \frac{1}{40} = \frac{1}{60} = \frac{1}{100} = \frac{1}{120} = \frac{1}{140}$
- b $0.5 = \frac{50}{100} = \frac{1}{2} = \frac{2}{4} = \frac{1}{6} = \frac{1}{24} = \frac{1}{50} = \frac{1}{62} = \frac{1}{78} = \frac{1}{80}$
- c $0.25 = \frac{25}{100} = \frac{1}{4} = \frac{1}{12} = \frac{1}{20} = \frac{1}{40} = \frac{1}{52} = \frac{1}{60} = \frac{1}{80}$
- d $0.8 = \frac{80}{100} = \frac{1}{10} = \frac{1}{20} = \frac{1}{30} = \frac{1}{40} = \frac{1}{50} = \frac{1}{60} = \frac{1}{70}$

Hint
Think about the relationship between the numerator and the denominator; e.g. if a fraction is equivalent to 0.5 the numerator is half the denominator.



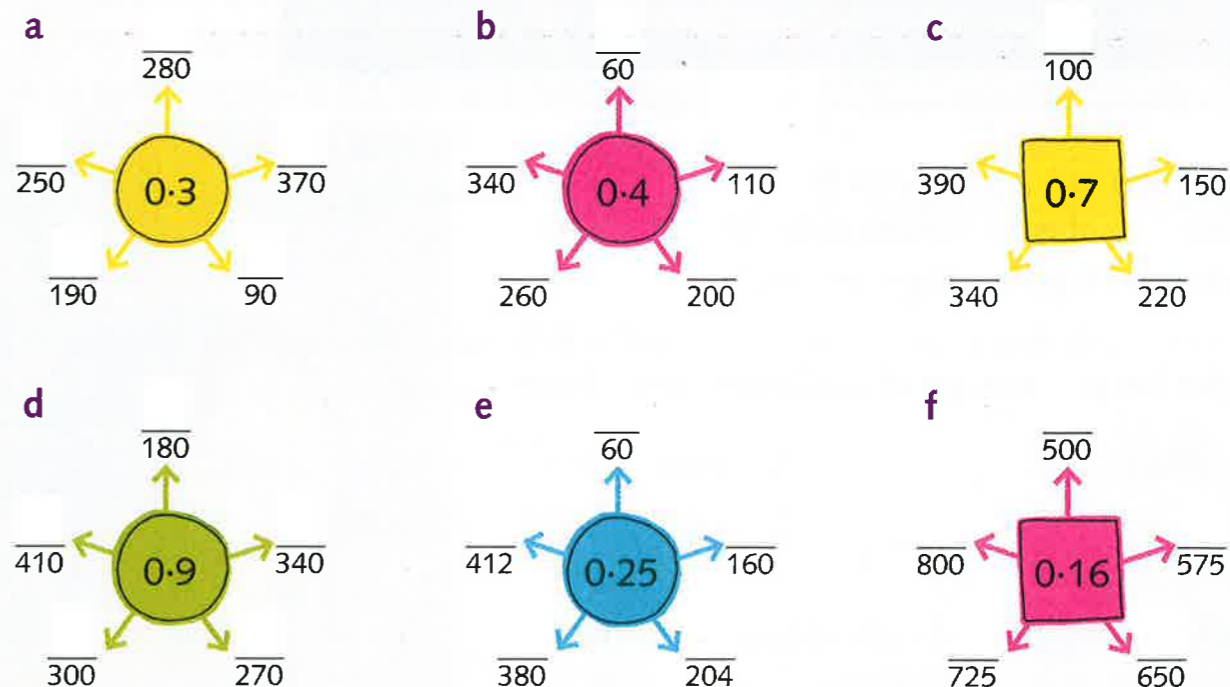
Example
 $\frac{1}{10} = 1 \div 10 = 0.1$

2 Check that all your fractions in Question 1 are equivalent.

1 Write eight fractions that are equivalent to each of these decimals. Check that all your fractions are equivalent to the decimal by dividing the numerator by the denominator.

- a 0.2
- b 0.6
- c 0.75
- d 0.32
- e 0.88
- f 0.05

2 Find the missing numerators in these fractions. Check your answers using division.



Challenge 3

Play this game with a partner. You will be converting fractions to decimals.

- Take turns to roll both the dice, e.g. 5 and 8.
- Make a fraction with the smaller number as the numerator and the larger number as the denominator, i.e. $\frac{5}{8}$.
- Use division to convert the fraction into a decimal rounded to 2 decimal places, i.e. 0.63.
- Check your answer using a calculator.
- If your answer is correct, this is your score for that round.
- If your answer is incorrect, you score zero.
- After 10 rounds each player adds up their scores.
- The winner is the player with the larger score.

You will need:
• 2 x 0–9 dice
• calculator

