

Questions asked to check for student understanding



Record your thinking.



You can use a calculator for this question.



Work with a partner.



Work out the answers **by yourself** first (**THINK**).

Find a partner (**PAIR**).

Tell your partner how you did it and why.

Discuss the best way to find the answer (**SHARE**).



Work as a group.



This is the equipment icon that will tell you what you need for the activity.



Either make a copy or ask your teacher for a copy.

or



(Printable masters available through www.caxed.co.nz)



Discussion

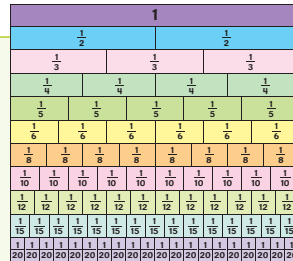
When you see this box, you will find some questions to discuss with a partner or your group.

Questions asked to check for student understanding



e Use the fraction wall or doubling and halving to help you find the missing numbers.

- i $\frac{4}{10} = \frac{?}{5}$ ii $\frac{3}{4} = \frac{?}{8}$ iii $\frac{10}{12} = \frac{?}{6}$
 iv $\frac{4}{6} = \frac{?}{3}$ v $\frac{4}{5} = \frac{?}{10}$ vi $\frac{8}{20} = \frac{?}{10}$
 vii $\frac{5}{8} = \frac{?}{16}$ viii $\frac{10}{14} = \frac{?}{7}$



2 Equivalent fractions – tenths and hundredths

a On your copy of a hundreds square, colour the first square of each row.

- i What fraction of each row is coloured?
 ii What fraction of the whole hundred squares has been coloured?
 iii



I think that $\frac{1}{10}$ and $\frac{10}{100}$ are equivalent.

Do you agree with Simon?
 Explain, using your hundreds square to help.

Simon

iv Copy and finish this equation. $\frac{1}{10} = \frac{?}{100}$

b i Nathan coloured 25 of the 100 squares or $\frac{25}{100}$.

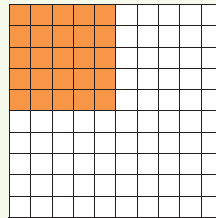


I think that $\frac{25}{100}$ is the same as $\frac{1}{4}$.

Do you agree with Nathan? Explain.

Nathan

ii Copy and finish this equation. $\frac{1}{4} = \frac{?}{100}$



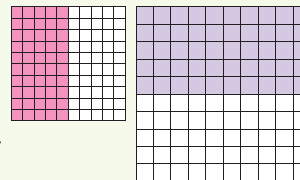
c i



I coloured $\frac{50}{100}$ of one square and half of the other. I have coloured the same-sized area.

Poppy

Explain the error in Poppy's thinking.



ii Would $\frac{50}{100}$ of \$40 be the same as $\frac{1}{2}$ of \$100? Explain.



5 This is the logo for a group called U-turn, entered in the school mathematics competition.



design 1



design 2



design 3



There are 2 more than the design number in the bottom row. For design 3 the total number of circles is $(3 + 2) + (2 \times 3) = 5 + 6 = 11$

There are the same number as the design number in the middle of the bottom row. For design 3 the total number of circles is $3 + (2 \times 4) = 3 + 8 = 11$



- a Explain to your partner how Jess and Max got 11 circles.
 b Use each of Max's and Jess's ways to work out the total number of circles that are needed for design 20.
 c Work out how many circles are needed for design 25. Justify your answer.



6 Find how many shapes are in design 20 of each of these paving patterns.

Explain how you got your answer to a partner.

If you and your partner did it differently, discuss which way you think is best.

Write a rule for each one in words.

