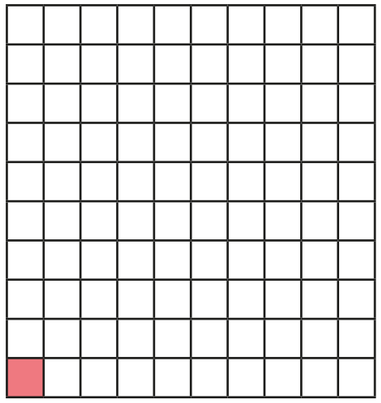
Fractions to decimals (1)

1 Complete the sentences.

a)

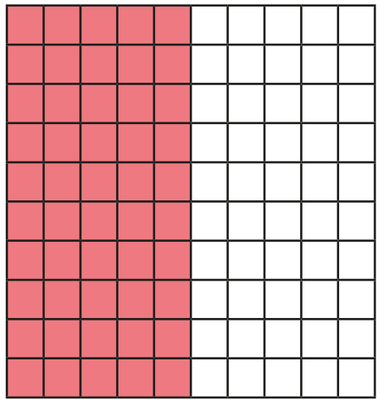


Each square represents $\frac{1}{100}$

$\frac{1}{100}$ of the whole square is shaded.

This is equivalent to 0·01 as a decimal.

b)



$\frac{50}{100}$ of the whole square is shaded.

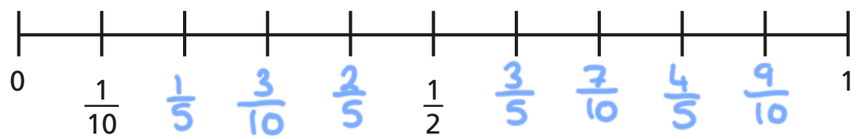
This can be simplified to $\frac{1}{2}$

This is equivalent to 0·5 as a decimal.

2 **a)**

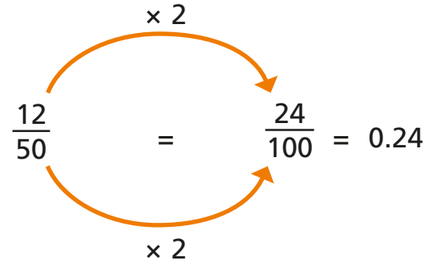


b)



What is the same and what is different about the number lines?

3 To convert a fraction to a decimal, you can use equivalent fractions to make the denominator 100



Use this method to find the equivalent decimals for the fractions.

a) $\frac{28}{50} = \frac{56}{100} =$ 0·56

b) $\frac{6}{20} = \frac{30}{100} =$ 0·3

c) $\frac{9}{25} = \frac{36}{100} =$ 0·36

d) $\frac{24}{200} = \frac{12}{100} =$ 0·12

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4 Some fractions can be converted to have a denominator of 1,000 to find their decimal equivalent.

$$\frac{62}{500} \xrightarrow{\times 2} \frac{124}{1000} = 0.124$$

a) $\frac{27}{500} = \frac{54}{1000} = 0.054$

b) $\frac{62}{250} = \frac{248}{1000} = 0.248$

c) $\frac{51}{200} = \frac{255}{1000} = 0.255$

d) $\frac{128}{2{,}000} = \frac{64}{1000} = 0.064$

5 Convert the fractions to their decimal equivalents.

a) $\frac{1}{5} = 0.2$

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

$\frac{1}{20} = 0.05$

$\frac{1}{40} = 0.025$

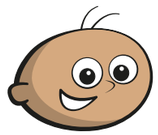
b) $\frac{1}{20} = 0.05$

$\frac{2}{20} = 0.1$

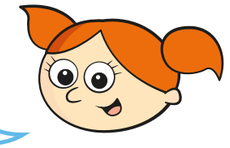
$\frac{3}{20} = 0.15$

$\frac{6}{20} = 0.3$

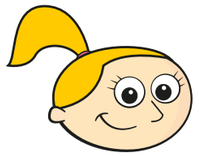
6 Tommy, Alex and Eva are working out the decimal equivalent of $\frac{60}{200}$



Tommy: You need to convert it to have a denominator of 100 to find the decimal equivalent.



Alex: I disagree. You need to convert it to have a denominator of 1,000



Eva: Both of you are right!

Who do you agree with? Eva

Explain your thinking.

Tommy's method: $\frac{60}{200} = \frac{30}{100} = 0.30 = 0.3$

Alex's method: $\frac{60}{200} = \frac{300}{1{,}000} = 0.300 = 0.3$

They get the same answer.

7 0.5 is equivalent to $\frac{1}{2}$, $\frac{5}{10}$, $\frac{50}{100}$

Are these the only fractions that are equivalent to 0.5?

How many fractions can you find?

various answers.

Compare answers with a partner.

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