MATHEMATICS · GRADES 7-9

Converting between fractions and decimals

Difficulty level: Intermediate

Mathematics: Grades 7-9

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Overview of the concept

This is how you switch a value between a fraction and a decimal (see Terminating and repeating decimals). You might turn a recipe fraction into a decimal for a calculator, or a sale price into a fraction for a quick share. Being able to move both ways means you can always use whichever form the situation calls for.



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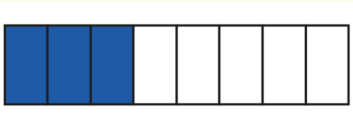
Worked examples

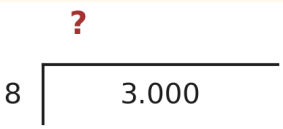
EXAMPLE 1

Q Convert $\frac{3}{8}$ to a decimal



3 out of 8 shaded

3/8



SOLUTION

Divide the numerator by the denominator: 3 ÷ 8

Dividing gives 3 ÷ 8 = 0.375

So $\frac{3}{8}$ = 0.375

EXAMPLE 2

Q Convert 0.6 to a fraction



6 out of 10 shaded

6/10 = ?

SOLUTION

Write 0.6 as $\frac{6}{10}$, since the 6 is in the tenths place.

6 ÷ 2 = 3

10 ÷ 2 = 5

So 0.6 = $\frac{3}{5}$

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Practice questions

1. You share a chocolate bar equally with 3 friends, so you get 1 part out of 4. Write the fraction as a decimal.

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2. A ribbon is cut in half and you take 1 part. Write the fraction as a decimal.

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3. A garden bed is split into 4 equal parts and 3 parts are planted. Write the fraction planted as a decimal.

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4 A juice bottle holds 0.2 litres. Write it as a fraction in lowest terms.

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5 A rope is 0.75 m long. Write it as a fraction in lowest terms.

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6 A paper strip is cut into 5 equal parts with 1 part shaded. Write the fraction as a decimal.

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7 A measurement is 0.125. Write it as a fraction in lowest terms.

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8 A bar is cut into 10 equal parts with 7 parts shaded. Write the fraction as a decimal.

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9 A jug holds 0.4 litres. Write it as a fraction in lowest terms.

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10 A pizza is cut into 8 equal slices and you eat 1 slice. Write the fraction as a decimal.

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ANSWER KEY

1. 0.25

2. 0.5

3. 0.75

4. $\frac{1}{5}$

5. $\frac{3}{4}$

6. 0.2

7. $\frac{1}{8}$

8. 0.7

9. $\frac{2}{5}$

10. 0.125

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