MATHEMATICS · GRADES 4-6

Converting decimals to fractions

Difficulty level: Intermediate

Mathematics: Grades 4-6

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Overview of the concept

This is how you write a decimal (see Terminating and repeating decimals) as an exact fraction. Turning a decimal share of a pizza into a quarter gives you the simplest exact form of the amount. Decimals are handy for calculators, but fractions are exact, and sometimes the exact form is what you need.



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Worked examples

EXAMPLE 1

Q Write 0.75 as a fraction

SOLUTION

$0.75 = \frac{75}{100}$

Divide top and bottom by 25

Answer: $\frac{3}{4}$

Write the decimal over its place value: 0.75 is 75 hundredths, so $\frac{75}{100}$.

$75 \div 25 = 3$

$100 \div 25 = 4$

So the answer is $\frac{3}{4}$.

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EXAMPLE 2

Q Write 0.6 as a fraction

SOLUTION

$0.6 = \frac{6}{10}$

Divide top and bottom by 2

Answer: $\frac{3}{5}$

Write the decimal over its place value: 0.6 is 6 tenths, so $\frac{6}{10}$.

$6 \div 2 = 3$

$10 \div 2 = 5$

So the answer is $\frac{3}{5}$.

Practice questions

1 What fraction is 0.5 in simplest form?

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2 Change 0.25 into a fraction.

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3 Give 0.8 as a fraction in simplest form.

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4 What fraction is 0.35?

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5 **What fraction is 0.2?**

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6 **Write 0.45 as a fraction in simplest form.**

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7 **What fraction is 0.4?**

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8 **Write 0.15 as a fraction.**

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9 **What fraction is 0.05?**

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10 **Write 0.9 as a fraction in simplest form.**

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ANSWER KEY

1. $\frac{1}{2}$

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

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

4. $\frac{7}{20}$

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

6. $\frac{9}{20}$

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

8. $\frac{3}{20}$

9. $\frac{1}{20}$

10. $\frac{9}{10}$

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