

Number Form Switch

Move between fractions, decimals, and percents.

GRADE 7 • 7.NR.1.10

7.NR.1.10 "Convert rational numbers between forms to include fractions, decimal numbers and percentages, using understanding of the part divided by the whole. Know that the decimal form of a rational number terminates in 0s or eventually repeats."

NAME _____

DATE _____

PARTS, DECIMALS, PERCENTS

A fraction shows a part divided by a whole, so divide the numerator by the denominator to make a decimal. Multiply a decimal by 100 to make a percent, and divide a percent by 100 to make a decimal. A rational number's decimal either ends or has a digit pattern that repeats.

WORKED EXAMPLE

Write $\frac{7}{16}$ as a decimal and a percent.

1. Divide 7 by 16.
2. $\frac{7}{16} = 0.4375$.
3. Multiply 0.4375 by 100 to write a percent.

Answer: 0.4375 and 43.75%

PRACTICE 6 problems

- 1** Write $\frac{3}{8}$ as a decimal and a percent.

ANSWER _____

- 2** Write 0.62 as a fraction in simplest form and a percent.

ANSWER _____

- 3** Write 45% as a fraction in simplest form and a decimal.

ANSWER _____

- 4** Write $\frac{5}{6}$ as a decimal and a percent. Use ... to show the repeating digits.

ANSWER _____

- 5** Write 1.25 as a fraction in simplest form and a percent.

ANSWER _____

- 6** Write $\frac{11}{12}$ as a decimal and a percent. Use ... to show the repeating digits.

ANSWER _____

APPLY IT Show your work

- 1** A music app shows that 13 of 20 songs in a playlist are saved for offline listening. Write the part saved as a fraction, decimal, and percent.

WORK SPACE

ANSWER _____

- 2** A hoodie was marked down by \$9.60 from its original price of \$24. What fraction of the original price was the discount? Write the fraction in simplest form, then write the decimal and percent.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A survey found that 17 of 30 students want a later start time. Write the fraction in simplest form, its decimal, and its percent. Then explain why the decimal repeats instead of terminating.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write $\frac{3}{8}$ as a decimal and a percent.	0.375, 37.5%
2	Write 0.62 as a fraction in simplest form and a percent.	$\frac{31}{50}$, 62%
3	Write 45% as a fraction in simplest form and a decimal.	$\frac{9}{20}$, 0.45
4	Write $\frac{5}{6}$ as a decimal and a percent. Use ... to show the repeating digits.	0.833..., 83.333...%
5	Write 1.25 as a fraction in simplest form and a percent.	$\frac{5}{4}$, 125%
6	Write $\frac{11}{12}$ as a decimal and a percent. Use ... to show the repeating digits.	0.9166..., 91.666...%

PART 2 • APPLY IT

- 13/20, 0.65, 65%** Divide 13 by 20 to get 0.65. Multiply 0.65 by 100 to get 65%.
- 2/5, 0.4, 40%** Write the discount as $\frac{9.60}{24}$, which simplifies to $\frac{2}{5}$. Dividing gives 0.4, and 0.4 equals 40%.

CHALLENGE

17/30, 0.5666..., 56.666...%. The decimal repeats because after 0.5, the remainder produces 6 again and again when dividing by 30.

Accept equivalent fractions that are simplified when the prompt asks for simplest form. Accept repeating decimals shown with an ellipsis or a bar over the repeating digit or digits.