

Decimals and Fractions Percents

Goal: Write decimals and fractions as percents.

EXAMPLE 1 Writing Decimals as Percents

a. $1.09 = (1.09 \times 100)\% = (109)\% = 109\%$

b. $0.3 = (0.3 \times 100)\% = (30)\% = 30\%$

You can also write a decimal as a percent by writing the decimal as a fraction with a denominator of 100. The percent is the numerator. For example,

$$0.3 = \frac{3}{10}$$

$$= \frac{30}{100} = 30\%$$

Guided Practice Write the decimal as a percent.

1. 0.78	2. 0.5	3. 9.2	4. 0.401
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EXAMPLE 2 Writing Fractions as Percents

a. $\frac{2}{5} = \frac{2 \cdot 20}{5 \cdot 20} = \frac{40}{100} = 40\%$

b. $\frac{78}{600} = \frac{78 \div 6}{600 \div 6} = \frac{13}{100} = 13\%$

c. $\frac{9}{4} = \frac{9 \cdot 25}{4 \cdot 25} = \frac{225}{100} = 225\%$

Guided Practice Write the fraction as a percent.

5. $\frac{7}{10}$	6. $\frac{11}{25}$	7. $\frac{3}{50}$	8. $\frac{7}{8}$
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EXAMPLE 3 Ordering Rational Numbers

Survey A survey asking teenagers to name something they do all day on Saturday had the following results: $\frac{7}{20}$ go to the beach, 0.21 go to a friend's house, and 28.2% go to the mall. Order the numbers from least to greatest.

Solution

Method 1 Write the numbers as percents.

$$\frac{7}{20} = \frac{7 \times \boxed{5}}{20 \times \boxed{5}} = \frac{\boxed{35}}{\boxed{100}} = \boxed{35}\%$$

$$0.21 = (\boxed{0.21} \times \boxed{100})\% = \boxed{21}\%$$

$$28.2\% = \boxed{28.2}\%$$

Compare the percents. $\boxed{21}\% < \boxed{28.2}\%$ and

$$\boxed{28.2}\% < \boxed{35}\%.$$

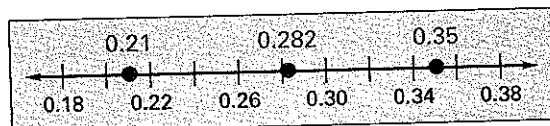
Method 2 Write the numbers as decimals.

$$\frac{7}{20} = \boxed{0.350} \quad 0.21 = \boxed{0.210} \quad 28.2\% = \boxed{0.282}$$

Compare the decimals. $\boxed{0.210} < \boxed{0.282}$ and

$$\boxed{0.282} < \boxed{0.350}.$$

Check Use a number line to order the decimals.



Answer: The numbers ordered from least to greatest are $\boxed{0.21}$, $\boxed{28.2\%}$, and $\boxed{\frac{7}{20}}$.

Guided Practice Order the numbers from least to greatest.

Homework

9. 0.165, $\frac{4}{25}$, 1.5%

10. 25%, 0.02, $\frac{1}{5}$

11. $\frac{11}{8}$, 0.13, 13.75%