



9-7 Fractions, Decimals, and Percents

(Pages 458–461)

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| <p>Writing Equivalent Forms of Fractions, Decimals, and Percents</p> | <ul style="list-style-type: none"> To express a decimal as a percent, write the decimal as a fraction with 1 as the denominator. Then write that fraction as an equivalent fraction with 100 as the denominator. To express a fraction as a percent, first write the fraction as a decimal by dividing numerator by denominator. Then write the decimal as a percent. To express a percent as a fraction, write the percent in the form $\frac{r}{100}$ and simplify. To express a percent as a decimal, write the percent in the form $\frac{r}{100}$ and then write as a decimal. |
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EXAMPLES

A Express $\frac{3}{5}$ as a decimal and as a percent.

$$\begin{aligned} \frac{3}{5} &= 3 \div 5 & 0.6 &= 0.60 \\ &= 0.6 & &= \frac{60}{100} \text{ or } 60\% \end{aligned}$$

B Express 0.08 as a fraction and as a percent.

$$\begin{array}{c} \times 100 \\ \curvearrowright \\ \frac{0.08}{1} = \frac{8}{100} \text{ or } \frac{2}{25} \\ \times 100 \curvearrowleft \end{array} \quad 0.08 = \frac{8}{100} = 8\%$$

Try These Together

1. Express 0.59 as a percent and then as a fraction.

HINT: Begin by writing 0.59 as $\frac{59}{100}$.

2. Express 45% as a decimal and then as a fraction.

HINT: 45% means how many out of 100?

PRACTICE

Express each decimal as a percent and then as a fraction in simplest form.

3. 0.90 4. 0.80 5. 1.35 6. 3.20 7. 0.62 8. 2.24

Express each fraction as a percent and then as a decimal.

9. $\frac{3}{6}$ 10. $\frac{2}{5}$ 11. $\frac{12}{16}$ 12. $\frac{5}{4}$ 13. $\frac{18}{40}$ 14. $\frac{1}{8}$

15. **Retail** A floor lamp is on sale for 60% off. What fraction off is this?



16. **Standardized Test Practice** Which of the following lists is in order from least to greatest?

- A** 2.5, 2.5%, 0.0025 **B** 2.5%, 0.25, 2.5
C 0.0025, 0.25, 2.5% **D** 0.25, 2.5%, 2.5

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| <p>Answers: 1. 59%; $\frac{59}{100}$ 2. 0.45; $\frac{9}{20}$ 3. 90%; $\frac{9}{10}$ 4. 80%; $\frac{5}{4}$ 5. 135%; $\frac{27}{20}$ 6. 320%; $\frac{5}{16}$ 7. 62%; $\frac{50}{81}$ 8. 224%; $\frac{28}{25}$ 9. 50%; 0.5 10. 40%; 0.4 11. 75%; 0.75 12. 125%; 1.25 13. 45%; 0.45 14. 12.5%; 0.125 15. $\frac{3}{5}$ 16. B</p> |
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