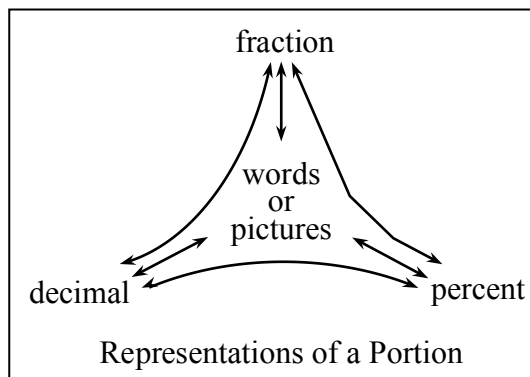


Fractions, decimals, and percents are different ways to represent the same portion or number.



For additional information, see the Math Notes boxes in Lessons 3.1.4 and 3.1.5 of the *Core Connections, Course 1* text. For additional examples and practice, see the *Core Connections, Course 1* Checkpoint 5 materials.

Examples

Decimal to percent:

Multiply the decimal by 100.

$$(0.81)(100) = 81\%$$

Fraction to percent:

Write a proportion to find an equivalent fraction using 100 as the denominator. The numerator is the percent.

$$\frac{4}{5} = \frac{x}{100} \text{ so } \frac{4}{5} = \frac{80}{100} = 80\%$$

Decimal to fraction:

Use the digits in the decimal as the numerator.

Use the decimal place value name as the denominator. Simplify as needed.

a. $0.2 = \frac{2}{10} = \frac{1}{5}$

b. $0.17 = \frac{17}{100}$

Percent to decimal:

Divide the percent by 100.

$$43\% \div 100 = 0.43$$

Percent to fraction:

Use 100 as the denominator. Use the percent as the numerator. Simplify as needed.

$$22\% = \frac{22}{100} = \frac{11}{50}$$

$$56\% = \frac{56}{100} = \frac{14}{25}$$

Fraction to decimal:

Divide the numerator by the denominator.

$$\frac{3}{8} = 3 \div 8 = 0.375 \quad \frac{5}{8} = 5 \div 8 = 0.625$$

$$\frac{3}{11} = 3 \div 11 = 0.2727\dots = 0.\overline{27}$$

Problems

Convert the fraction, decimal, or percent as indicated.

1. Change $\frac{1}{4}$ to a decimal.
2. Change 50% into a fraction in lowest terms.
3. Change 0.75 to a fraction in lowest terms.
4. Change 75% to a decimal.
5. Change 0.38 to a percent.
6. Change $\frac{1}{5}$ to a percent.
7. Change 0.3 to a fraction.
8. Change $\frac{1}{8}$ to a decimal.
9. Change $\frac{1}{3}$ to a decimal.
10. Change 0.08 to a percent.
11. Change 87% to a decimal.
12. Change $\frac{3}{5}$ to a percent.
13. Change 0.4 to a fraction in lowest terms.
14. Change 65% to a fraction in lowest terms.
15. Change $\frac{1}{9}$ to a decimal.
16. Change 125% to a fraction in lowest terms.
17. Change $\frac{8}{5}$ to a decimal.
18. Change 3.25 to a percent.
19. Change $\frac{1}{16}$ to a decimal.
Change the decimal to a percent.
20. Change $\frac{1}{7}$ to a decimal.
21. Change 43% to a fraction.
Change the fraction to a decimal.
22. Change 0.375 to a percent.
Change the percent to a fraction.
23. Change $\frac{7}{8}$ to a decimal.
Change the decimal to a percent.
24. Change $0.\overline{12}$ to a fraction
25. Change $0.\overline{175}$ to a fraction

Answers

- | | | | |
|------------------------------------|---------------------------------------|-------------------|-------------------------------------|
| 1. 0.25 | 2. $\frac{1}{2}$ | 3. $\frac{3}{4}$ | 4. 0.75 |
| 5. 38% | 6. 20% | 7. $\frac{3}{10}$ | 8. 0.125 |
| 9. $0.3\bar{3}$ | 10. 8% | 11. 0.87 | 12. 60% |
| 13. $\frac{2}{5}$ | 14. $\frac{13}{20}$ | 15. $0.1\bar{1}$ | 16. $\frac{5}{4}$ or $1\frac{1}{4}$ |
| 17. 1.6 | 18. 325% | 19. 0.0625; 6.25% | 20. $0.\overline{142859}$ |
| 21. $\frac{43}{100}$; 0.43 | 22. $37\frac{1}{2}\%$; $\frac{3}{8}$ | 23. 0.875; 87.5% | |
| 24. $\frac{12}{99} = \frac{4}{33}$ | 25. $\frac{175}{999}$ | | |