

What's Your Percentage?

24

Facts and Reminders

Percents

The math term *percent* means "of one hundred." A percent is a fraction in which the denominator is 100 and the numerator expresses some part of the 100. A percent can be expressed as a fraction, a decimal, or with the percent sign (%).

Table of Equivalent Values

Fraction	Decimal	Percent
200/100	2.00	200%
150/100	1.50	150%
100/100	1.00	100%
90/100 (9/10)	.90	90%
75/100 (3/4)	.75	75%
60/100 (3/5)	.60	60%
50/100 (1/2)	.50	50%
25/100 (1/4)	.25	25%
10/100 (1/10)	.10	10%
1/100	.01	1%

The table above shows the equivalent values of percents, decimals, and fractions—in terms of 100 and in reduced form. (Note: Decimals under 10% must have a zero after the decimal point and before the other digit, as in .01.)

Computing Percentages

To compute a percentage of a specific number, follow the steps below.

1. Change the percent to the decimal form.
2. Multiply the decimal form times the specific number.
3. Count all places to the right of the decimal points in the problem.
4. Place the decimal the same number of places to the right of the decimal in the answer.

Percentages less than 100: 30% of 80 = 80

$$\begin{array}{r} \underline{ \times 30} \\ 24.00 \\ \hline \end{array}$$

Answer: 30% of 80 = 24

20% of 62 = 62

$$\begin{array}{r} \underline{ \times 20} \\ 12.40 \\ \hline \end{array}$$

Answer: 20% of 62 = 12.4

Percentages greater than 100: 200% of 75 = 75

$$\begin{array}{r} \underline{ \times 2.00} \\ 150.00 \\ \hline \end{array}$$

Answer: 200% of 75 = 150
(larger than 75)

(Note: All percentages greater than 100 will yield a number larger than the value with which you started.)

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Computing Percents Over 100

All percentages greater than 100 will yield a number larger than the value with which you started. (Note: Percentages over 100 are converted to a decimal with the decimal point moved two places to the left. For example, 200% is converted to 2.00.) Look at the problem below.

$$\begin{array}{r} 200\% \text{ of } 60 = \quad 60 \\ \quad \quad \quad \quad \quad \times 2.00 \\ \hline 120.00 \end{array}$$

Answer: 200% of 60 = 120
(larger than 60)

Directions: Study the Facts and Reminders page from this unit. Compute these percentages. Use a calculator to check your answers. The first two are started for you.

1. 200% of 50 =

$$\begin{array}{r} 50 \\ \times 2.00 \\ \hline \end{array}$$

2. 150% of 40 =

$$\begin{array}{r} 40 \\ \times 1.50 \\ \hline \end{array}$$

3. 120% of 60 =

$$\begin{array}{r} 60 \\ \times 1.20 \\ \hline 1200 \end{array}$$

4. 300% of 100 =

5. 220% of 48 =

6. 125% of 20 =

7. 190% of 50 =

8. 120% of 100 =

9. 300% of 90 =

10. 400% of 60 =

11. 150% of 26 =

12. 135% of 100 =

13. 500% of 80 =

14. 180% of 100 =

15. 160% of 10 =

16. 250% of 100 =

17. 130% of 70 =

18. 140% of 90 =

19. 127% of 47 =

20. 239% of 82 =

21. 217% of 700 =

What's Your Percentage?

Converting Fractions to Percents

A fraction is converted to a percentage by dividing the denominator into the numerator.

$$\begin{array}{l} \text{numerator} \longrightarrow \frac{1}{4} \\ \text{denominator} \longrightarrow \end{array} \quad 4 \overline{) \begin{array}{r} .25 \\ 1.00 \end{array}} \quad \frac{1}{2} \quad 2 \overline{) \begin{array}{r} .50 \\ 1.00 \end{array}}$$

Always place a decimal point and two zeros to the right of the numerator in the dividend. This converts the fraction to a decimal which is used to compute the percent.

Directions: Convert the fractions in these problems into decimals. Use the decimals to compute the percentages. The first one is done for you.

1. $\frac{1}{2}$ of 24 = 12

2. $\frac{3}{4}$ of 32 = _____

3. $\frac{5}{10}$ of 80 = _____

$$2 \overline{) \begin{array}{r} .50 \\ 1.00 \end{array}}$$

$$\begin{array}{r} 24 \\ \times .50 \\ \hline 12.00 \end{array}$$

4. $\frac{1}{4}$ of 84 = _____

5. $\frac{3}{10}$ of 105 = _____

6. $\frac{9}{10}$ of 56 = _____

7. $\frac{1}{2}$ of 87 = _____

8. $\frac{3}{5}$ of 204 = _____

9. $\frac{1}{5}$ of 94 = _____

10. $\frac{3}{20}$ of 66 = _____

11. $\frac{7}{20}$ of 52 = _____

12. $\frac{7}{10}$ of 48 = _____

Directions: Some fractions need to be divided to three or more places. Round the answers to two places.

13. $\frac{5}{8}$ of 64 = _____

14. $\frac{7}{8}$ of 88 = _____

15. $\frac{1}{8}$ of 14 = _____