

# What Is a Percent?

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Score: \_\_\_\_\_ / 24

## Q Quick Review

A **percent** means “per hundred.” Writing 45% is just another way of saying  $\frac{45}{100}$ . Because percents, fractions, and decimals all describe parts of a whole, you can switch between them. To change a **percent to a decimal**, divide by 100 (move the decimal point two places left):  $45\% = 0.45$ . To change a **decimal to a percent**, multiply by 100. To change a **fraction to a percent**, first make an equivalent fraction with 100 on the bottom, or divide and then multiply by 100. So  $\frac{3}{4} = \frac{75}{100} = 75\%$ .

◇ **Example:** Write  $\frac{3}{4}$  as a percent.

⇒ A percent is a part out of 100, so let’s rewrite  $\frac{3}{4}$  with 100 on the bottom. We ask: what times 4 gives 100? That is 25. Whatever we do to the bottom we do to the top, so we multiply both by 25:  $\frac{3 \times 25}{4 \times 25} = \frac{75}{100}$ . And  $\frac{75}{100}$  means 75 per hundred, which is 75%.

**Answer:** 75%

## PRACTICE

Convert between percents, decimals, and fractions as shown.

- |                                      |       |  |       |
|--------------------------------------|-------|--|-------|
| 1. Write 0.45 as a percent           | _____ | 11. Write $\frac{2}{25}$ as a percent  | _____ |
| 2. Write $\frac{3}{4}$ as a percent  | _____ | 12. Write 0.12 as a percent            | _____ |
| 3. Write $\frac{1}{5}$ as a percent  | _____ | 13. Write 125% as a fraction           | _____ |
| 4. Write 60% as a fraction           | _____ | 14. Write $\frac{1}{8}$ as a percent   | _____ |
| 5. Write 0.08 as a percent           | _____ | 15. Write 70% as a decimal             | _____ |
| 6. Write $\frac{7}{20}$ as a percent | _____ | 16. Write $\frac{3}{5}$ as a percent   | _____ |
| 7. Write 25% as a decimal            | _____ | 17. Write 0.04 as a percent            | _____ |
| 8. Write $\frac{9}{10}$ as a percent | _____ | 18. Write 35% as a fraction            | _____ |
| 9. Write 0.5 as a percent            | _____ | 19. Write $\frac{11}{20}$ as a percent | _____ |
| 10. Write 80% as a fraction          | _____ | 20. Write 1.5 as a percent             | _____ |

## ◆ Word Problems

21. On a math quiz, Jordan answered  $\frac{17}{20}$  of the questions correctly. What percent did Jordan get correct? \_\_\_\_\_
22. A phone battery is at 0.65 of a full charge. Write the battery level as a percent. \_\_\_\_\_
23. A store sign says 40% of all shirts are on sale. Write 40% as a fraction in simplest form. \_\_\_\_\_
24. In a survey,  $\frac{3}{8}$  of students chose pizza as their favorite lunch. Write this as a percent. \_\_\_\_\_



## Answer Keys

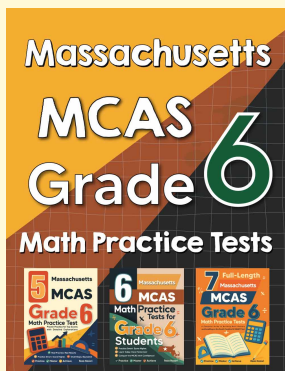
- |   |  |
|---|--|
| <p>1. <input type="text" value="45%"/></p> <p>2. <input type="text" value="75%"/></p> <p>3. <input type="text" value="20%"/></p> <p>4. <input type="text" value="3/5"/></p> <p>5. <input type="text" value="8%"/></p> <p>6. <input type="text" value="35%"/></p> <p>7. <input type="text" value="0.25"/></p> <p>8. <input type="text" value="90%"/></p> <p>9. <input type="text" value="50%"/></p> <p>10. <input type="text" value="4/5"/></p> <p>11. <input type="text" value="8%"/></p> <p>12. <input type="text" value="12%"/></p> | <p>13. <input type="text" value="5/4"/></p> <p>14. <input type="text" value="12.5%"/></p> <p>15. <input type="text" value="0.7"/></p> <p>16. <input type="text" value="60%"/></p> <p>17. <input type="text" value="4%"/></p> <p>18. <input type="text" value="7/20"/></p> <p>19. <input type="text" value="55%"/></p> <p>20. <input type="text" value="150%"/></p> <p>21. <input type="text" value="85%"/></p> <p>22. <input type="text" value="65%"/></p> <p>23. <input type="text" value="2/5"/></p> <p>24. <input type="text" value="37.5%"/></p> |
|---|--|

### Step-by-Step Explanations

- |   |  |
|---|--|
| <p>1. Multiply by 100: <math>0.45 \times 100 = 45\%</math>.</p> <p>2. <math>\frac{3}{4} = \frac{75}{100} = 75\%</math>.</p> <p>3. <math>\frac{1}{5} = \frac{20}{100} = 20\%</math>.</p> <p>4. <math>60\% = \frac{60}{100}</math>, which simplifies to <math>\frac{3}{5}</math>.</p> <p>5. Multiply by 100: <math>0.08 \times 100 = 8\%</math>.</p> <p>6. <math>\frac{7}{20} = \frac{35}{100} = 35\%</math>.</p> <p>7. Divide by 100: <math>25 \div 100 = 0.25</math>.</p> <p>8. <math>\frac{9}{10} = \frac{90}{100} = 90\%</math>.</p> <p>9. Multiply by 100: <math>0.5 \times 100 = 50\%</math>.</p> <p>10. <math>80\% = \frac{80}{100}</math>, which simplifies to <math>\frac{4}{5}</math>.</p> <p>11. <math>\frac{2}{25} = \frac{8}{100} = 8\%</math>.</p> <p>12. Multiply by 100: <math>0.12 \times 100 = 12\%</math>.</p> | <p>13. <math>125\% = \frac{125}{100}</math>, which simplifies to <math>\frac{5}{4}</math>.</p> <p>14. <math>\frac{1}{8} = 0.125</math>, and <math>0.125 \times 100 = 12.5\%</math>.</p> <p>15. Divide by 100: <math>70 \div 100 = 0.7</math>.</p> <p>16. <math>\frac{3}{5} = \frac{60}{100} = 60\%</math>.</p> <p>17. Multiply by 100: <math>0.04 \times 100 = 4\%</math>.</p> <p>18. <math>35\% = \frac{35}{100}</math>, which simplifies to <math>\frac{7}{20}</math>.</p> <p>19. <math>\frac{11}{20} = \frac{55}{100} = 55\%</math>.</p> <p>20. Multiply by 100: <math>1.5 \times 100 = 150\%</math>.</p> <p>21. Rewrite <math>\frac{17}{20}</math> with 100 on the bottom: <math>\frac{17 \times 5}{20 \times 5} = \frac{85}{100} = 85\%</math>.</p> <p>22. To turn a decimal into a percent, multiply by 100: <math>0.65 \times 100 = 65\%</math>.</p> <p>23. <math>40\% = \frac{40}{100}</math>. Dividing top and bottom by 20 gives <math>\frac{2}{5}</math>.</p> <p>24. Divide to get a decimal: <math>3 \div 8 = 0.375</math>. Then <math>0.375 \times 100 = 37.5\%</math>.</p> |
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