

4.6

Percentage

• Example 1

30 is what percent of 150?

Solution If we knew that this percent of 150 has some value p , we could write

$$30 = p\% \times 150 = \frac{p}{100} \times 150 = \frac{p}{10} \times 15$$

We then have

$$30 = \frac{p}{10} \times 15$$

or, equivalently,

$$p = \frac{300}{15} = 20$$

Thus, p is equal to 20, so 30 is 20% of 150.

Remark: A more direct way of solving this problem is to recognize that it amounts to writing the ratio $\frac{30}{150}$ as a percent.

$$\frac{30}{150} = \frac{1}{5} = 20\%$$

30 is 20% of 150.

● ● ● CHECK YOURSELF 1

- a. 75 is what percent of 300?
 - b. What percent of 400 is 72?
-

● ● ● CHECK YOURSELF ANSWER

1. (a) 25%; (b) 18%.
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4.6 Exercises

Name _____

Section _____

Date _____

A N S W E R S

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Solve each of the following problems involving percent.

1. What percent of 50 is 4?
2. 51 is what percent of 850?
3. What percent of 500 is 45?
4. 14 is what percent of 200?
5. What percent of 200 is 340?
6. 392 is what percent of 2800?
7. 210 is what percent of 120?
8. What percent of 40 is 52?
9. 360 is what percent of 90?
10. What percent of 15,000 is 18,000?
11. 60 is what percent of 800?
12. 500 is what percent of 1500?
13. What percent of 180 is 120?
14. What percent of 800 is 78?
15. What percent of 1200 is 750?
16. 68 is what percent of 800?
17. What percent of 400 is 84?
18. 120 is what percent of 1000?
19. What percent of 800 is 120?
20. 225 is what percent of 600?
21. 1071 is what percent of 1400?
22. What percent of 2400 is 1600?