

Name \_\_\_\_\_

## Model Percent

**Essential Question** How can you express real world quantities as percents and use them to solve problems?

### UNLOCK the Problem

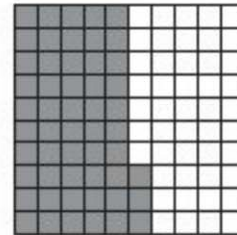
Percent means “per hundred” or “out of 100.” So, when you find percent you are finding a part of 100. Sixty percent, for example, means 60 out of 100. You can write percents using the percent symbol, %. So, 60 percent is written as 60%.

- What number is always compared in a percent?

\_\_\_\_\_

### Example 1 Name the percent that is shaded.

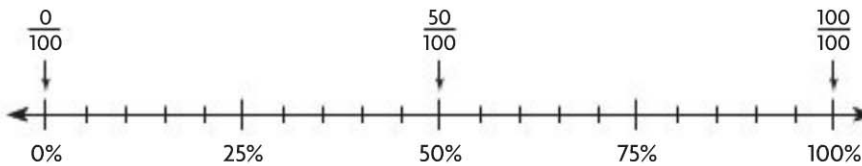
- 5 columns:  $5 \times 10 = 50$ .
- 3 squares:  $3 \times 1 = 3$
- Total:  $50 + 3 = 53$  out of 100, or 53 percent is shaded.



### Example 2 Name the percent that is not shaded.

- 4 columns:  $4 \times 10 = 40$ .
- 7 squares:  $7 \times 1 = 7$
- Total:  $40 + 7 = 47$  out of 100, or 47 percent is not shaded.

**Try This!** Use the number line. Tell what these percents mean:  
0 percent, 50 percent, 100 percent.



- 0 percent means \_\_\_\_\_ out of 100, or none of the total.
- 50 percent means \_\_\_\_\_ out of 100, or half of the total.
- 100 percent means \_\_\_\_\_ out of 100, or all of the total.

### Math Talk

Which benchmark is 33% closest to? **Explain** how you know.

## Share and Show



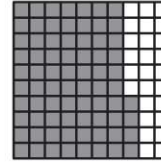
Use the diagram to write the percent.

1. How many whole columns and single squares are shaded?

\_\_\_\_\_

2. What percent is shaded?

\_\_\_\_\_

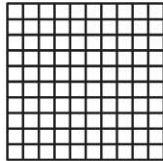


3. What percent is unshaded?

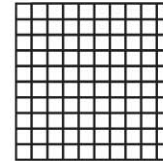
\_\_\_\_\_

Shade the grid to show the percent.

4. 20 percent



5. 86 percent



## On Your Own

Use the diagram to write the percent.

6. light shading

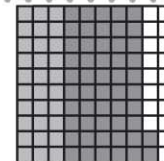
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7. dark shading

\_\_\_\_\_

8. not shaded

\_\_\_\_\_



9. not shaded

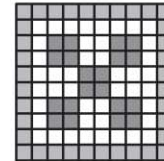
\_\_\_\_\_

10. dark shading

\_\_\_\_\_

11. light shading

\_\_\_\_\_



Write the closest benchmark for the percent.

12. 48%

\_\_\_\_\_

13. 94%

\_\_\_\_\_

14. 4%

\_\_\_\_\_

## Problem Solving



15. In an election between Warren and Jorge, Warren declared victory because he received 58 percent of the vote. Is he correct? **Explain.**

\_\_\_\_\_

\_\_\_\_\_