

Name _____

Model Percent

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

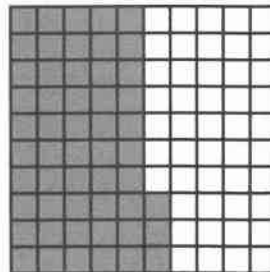
UNLOCK the Problem

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.

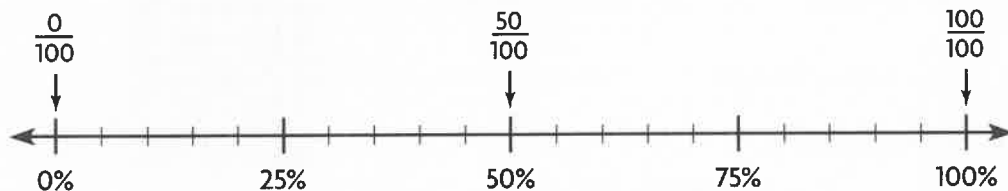
- 5 columns: $5 \times 10 = 50$.
- 3 squares: $3 \times 1 = 3$
- Total: $50 + 3 = 53$ out of 100, or 53 percent is shaded.



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.

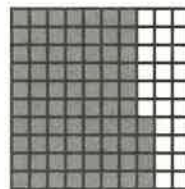
Share and Show



Use the diagram to write the percent.

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

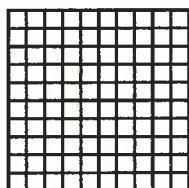
2. What percent is shaded?



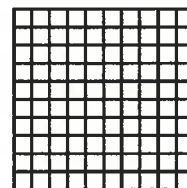
3. What percent is unshaded?

Shade the grid to show the percent.

4. 20 percent



5. 86 percent



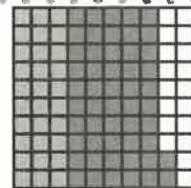
On Your Own

Use the diagram to write the percent.

6. light shading

7. dark shading

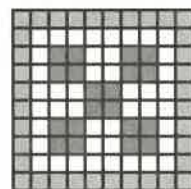
8. not shaded



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.**
