

Name \_\_\_\_\_

**Relate Decimals and Percents****Essential Question** How can you express decimals as percents and percents as decimals?**UNLOCK the Problem** REAL WORLD

Decimals and percents are two ways of expressing the same number. You can write a percent as a decimal. You can also write a decimal as a percent.

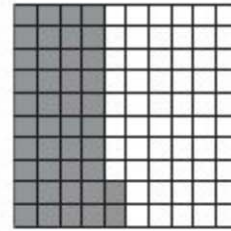
- In percent, the "whole" is 100. What is the "whole" in decimal form?

**Example 1** Model 0.42. Write 0.42 as a percent.**STEP 1** Write the decimal as a ratio.

$$0.42 = 42 \text{ hundredths} = 42 \text{ out of } 100.$$

**STEP 2** Make a model that shows 42 out of 100.**STEP 3** Use the model to write a percent.

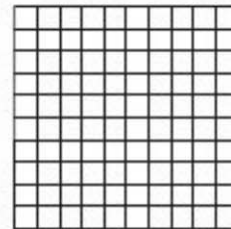
$$42 \text{ shaded squares} = \underline{42} \text{ percent, or } \underline{42} \%$$

**Example 2** Model 19 percent. Write 19% as a decimal.**STEP 1** Write the percent as a fraction.

$$19\% = \frac{19}{100}$$

**STEP 2** Make a model that shows 19 out of 100.**STEP 3** Use the model to write a decimal.

$$19 \text{ shaded squares out of } 100 \text{ squares} = \underline{\hspace{2cm}}$$

**Math Talk**

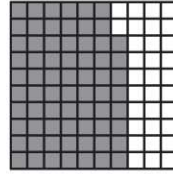
Suppose a store is having a 50% off sale. What does this mean?

## Share and Show



Use the model. Complete each statement.

1a.  $0.68 =$  \_\_\_\_\_ out of 100



1b. How many squares are shaded?

\_\_\_\_\_

1c. What percent is shaded?

\_\_\_\_\_

Write the percents as decimals.

2. 47 percent

\_\_\_\_\_

3. 11 percent

\_\_\_\_\_

## On Your Own

Write the decimals as percents.

4. 0.20

\_\_\_\_\_

5. 0.39

\_\_\_\_\_

6. 0.44

\_\_\_\_\_

7. 0.93

\_\_\_\_\_

8. 0.07

\_\_\_\_\_

9. 0.7

\_\_\_\_\_

10. 0.06

\_\_\_\_\_

11. 0.6

\_\_\_\_\_

Write the percents as decimals.

12. 12 percent

\_\_\_\_\_

13. 31%

\_\_\_\_\_

14. 99 percent

\_\_\_\_\_

15. 13 percent

\_\_\_\_\_

16. 4 percent

\_\_\_\_\_

17. 14 percent

\_\_\_\_\_

18. 90 percent

\_\_\_\_\_

19. 9%

\_\_\_\_\_

## Problem Solving



20. In basketball, Linda made 0.56 of her shots. What percent of her shots did Linda miss?

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