


# Explore Fractions, Decimals, and Percents

## Main Idea

I will explore the relationship between fractions, decimals, and percents.

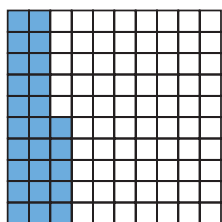
## NGSS

 MA.4.A.6.5 Relate halves, fourths, tenths, and hundredths to decimals and percents.

**Review Vocabulary**  
fraction

Fractions, decimals, and percents are related. They can all represent the same amount. A percent compares a number to 100, just as a fraction compares a part to a whole.

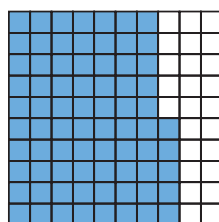
25%



25 out of 100

$$\frac{25}{100} = 0.25$$

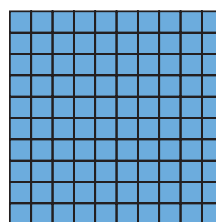
75%



75 out of 100

$$\frac{75}{100} = 0.75$$

100%



100 out of 100

$$\frac{100}{100} = 1 = 1.0$$

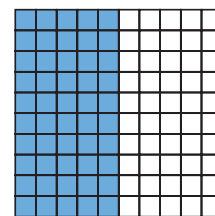
## ACTIVITY



**1** Model  $\frac{1}{2}$ . Then write it as a percent and a decimal.

**Step 1** Shade the model.

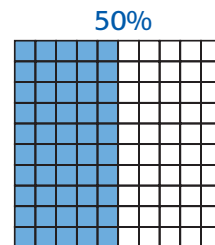
Determine how many parts on a hundreds grid should be shaded to represent  $\frac{1}{2}$ . Then shade.



One half of 100 is 50.

**Step 2** Write the fraction as a percent and a decimal.

Use the number of shaded squares to write  $\frac{1}{2}$  as a percent and decimal.



50 out of 100

$$\text{So, } \frac{1}{2} = \frac{50}{100} = 50\% = 0.50 = 0.5.$$



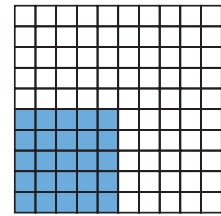
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## ACTIVITIES

- 2 Model 0.25. Then write it as a fraction and a percent.

Use a hundreds grid to shade 25 out of 100 parts.

The model shows that 0.25 is equivalent to  $\frac{1}{4}$  and 25%.

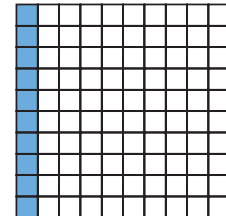


25 out of 100

- 3 Model 10%. Then write it as a fraction and a decimal.

Use a hundreds grid to shade 10 out of 100 parts.

The model shows that 10% is equivalent to  $\frac{10}{100}$  and 0.10.



10 out of 100

## Think About It

1. Draw a hundredths model to represent 0.3 and 0.28.
2. Which model contains more shaded squares? Explain.
3. Write two decimals that are equivalent to  $\frac{40}{100}$ .

## Practice and Apply It

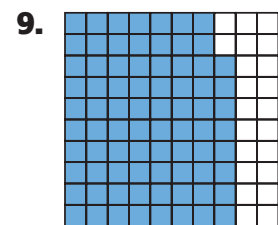
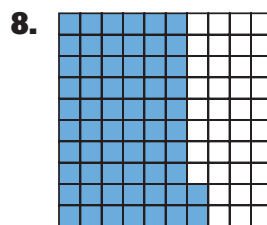
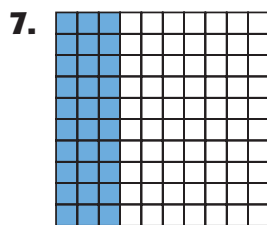
Model each number. Then write as a fraction, decimal, and percent.

4.  $\frac{3}{4}$

5. 0.18

6. 40%

Write a fraction, decimal, and percent for each shaded part.



10. **Write Math** Explain how to model nine hundredths with a hundredths grid.

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