

## Lesson 1: Percent

### Classwork

#### Opening Exercise 1: Matching

Match the percents with the correct sentence clues.

25%	I am half of a half. 5 cubic inches of water filled in a 20 cubic inch bottle.
50%	I am less than $\frac{1}{100}$ . 25 out of 5,000 contestants won a prize.
30%	I am the chance of birthing a boy or a girl. Flip a coin, and it will land on heads or tails.
1%	I am less than a half but more than one-fourth. 15 out of 50 play drums in a band.
10%	I am equal to 1. 35 question out of 35 questions were answered correctly.
100%	I am more than 1. Instead of the \$1,200 expected to be raised, \$3,600 was collected for the school's fundraiser.
300%	I am a tenth of a tenth. One penny is this part of one dollar.
$\frac{1}{2}\%$	I am less than a fourth but more than a hundredth. \$11 out of \$110 earned is saved in the bank.

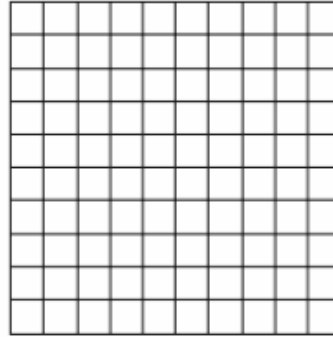
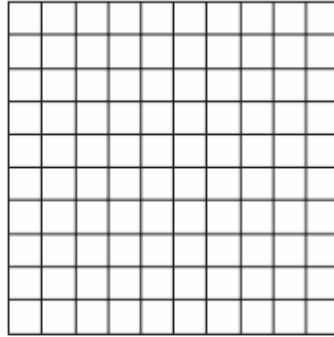
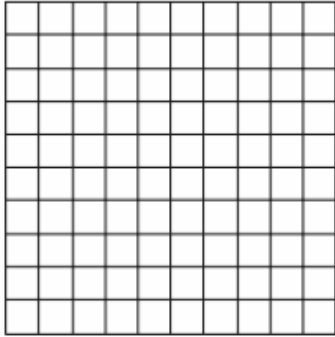
**Opening Exercise 2**

Color in the grids to represent the following fractions:

a.  $\frac{30}{100}$

b.  $\frac{3}{100}$

c.  $\frac{1}{3}$

**Example 1**

Use the definition of the word *percent* to write each percent as a fraction and then as a decimal.

Percent	Fraction	Decimal
37.5%		
100%		
110%		
1%		
$\frac{1}{2}\%$		

**Example 2**

Fill in the chart by converting between fractions, decimals, and percents. Show your work in the space below.

Fraction	Decimal	Percent
		350%
	0.025	
$\frac{1}{8}$		

**Exercise: Class Card Activity**

Read your card to yourself (each student has a different card), and work out the problem. When the exercise begins, listen carefully to the questions being read. When you have the card with the equivalent value, respond by reading your card aloud.

Examples:

0.22 should be read “twenty-two hundredths.”

$\frac{1}{5}$   
 $\frac{1}{1000}$  should be read “one-fifth thousandths” or “one-fifth over one thousand.”

$\frac{7}{300}$  should be read “seven three-hundredths” or “seven over three hundred.”

$\frac{200}{100}$  should be read “two hundred hundredths” or “two hundred over one hundred.”

## Lesson Summary

- One percent is the number  $\frac{1}{100}$  and is written 1%. The number  $P\%$  is the same as the number  $\frac{P}{100}$ .
- Usually, there are three ways to write a number: a percent, a fraction, and a decimal. The fraction and decimal forms of  $P\%$  are equivalent to  $\frac{P}{100}$ .

## Problem Set

- Create a model to represent the following percents.
  - 90%
  - 0.9%
  - 900%
  - $\frac{9}{10}\%$
- Benjamin believes that  $\frac{1}{2}\%$  is equivalent to 50%. Is he correct? Why or why not?
- Order the following from least to greatest:  
100%,  $\frac{1}{100}$ , 0.001%,  $\frac{1}{10}$ , 0.001, 1.1, 10, and  $\frac{10,000}{100}$
- Fill in the chart by converting between fractions, decimals, and percents. Show work in the space below.

Fraction	Decimal	Percent
		100%
	0.0825	
	6.25	
		$\frac{1}{8}\%$
$\frac{2}{300}$		
		33.3%
$\frac{3}{4}$ $\frac{3}{100}$		
		250%
	0.005	
$\frac{150}{100}$		
	0.055	