

**Please have a calculator  
every day for this unit!  
Not a phone.**

# Chapter 6 Percents

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## 6.1 Percents and Decimals

### Learning Targets

Write Fractions as Decimals and Percents

Write Decimals as Percents

Write Percents as Decimals

## 6.2 Comparing and Ordering

### Learning Target

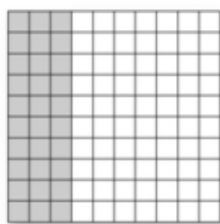
Compare Fractions, Decimals and Percents

# Percent: Out of 100

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Work with a partner. Write the percent shown by the model. Write the percent as a decimal. The first one has been done for you.

a.



$$\square = \frac{\square}{\square}$$

Labels:  $\square$  (numerator) is labeled "per",  $\square$  (denominator) is labeled "cent".

$$= \frac{\square}{\square}$$

Simplify.

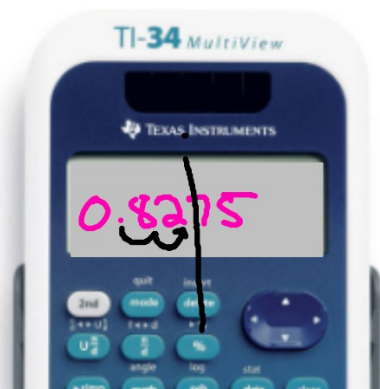
$$= \square$$

Write fraction as a decimal.

## Write Fraction as Decimal and Percent

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Your score on a Math Test  
was 24 out of 29 points.  
What Percent is this?



$$\frac{24}{29} \quad \frac{0}{0}$$

$$83\%$$

# Write Fraction as Decimal and Percent

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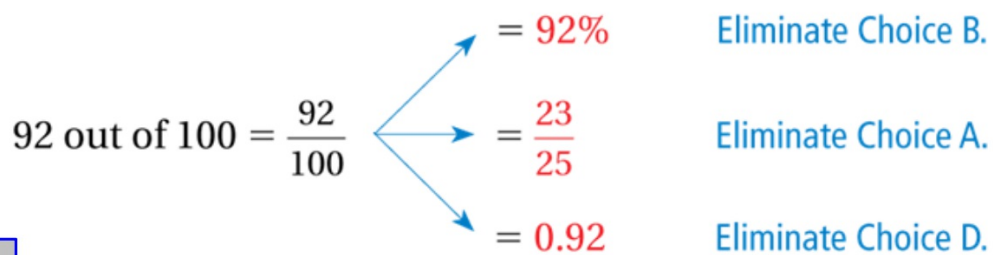
On a math test, you get 92 out of a possible 100 points. Which of the following is *not* another way of expressing 92 out of 100?

(A)  $\frac{23}{25}$

(B) 92%

(C)  ~~$\frac{17}{20}$~~

(D) 0.92



# Write a Decimal as a Percent

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## Multiply by 100

a. Write 0.47 as a percent.

$$0.47 = 0.47 = 47\%$$

b. Write 0.663 as a percent.

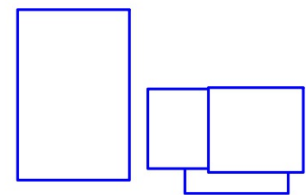
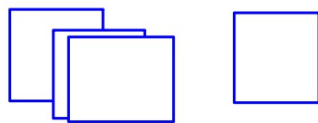
$$0.663 = 0.663 = 66.3\%$$

c. Write 1.8 as a percent.

$$1.8 = 1.80 = 180\%$$

d. Write 0.009 as a percent.

$$0.009 = 0.009 = 0.9\%$$



# Write a % as a Decimal

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## Divide by 100

a. Write 52% as a decimal. %

$$52\% = 52.\% = 0.52$$

b. Write 7% as a decimal.

$$7\% = 07.\% = 0.07$$

## Compare Fractions, Decimals and Percents

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Fraction  $\longrightarrow$  Decimal  $\longrightarrow$  Percent

Fraction  $\longleftarrow$  Decimal  $\longleftarrow$  Percent



23.6%

1st Decimal

Fraction  
in  
Simplest  
Form

0.236

Fraction

          
thousandths

$$\frac{236}{1000} \quad \text{simplify}$$

$$\frac{118}{500} = \frac{59}{250}$$

$$\frac{248}{100}$$

$$2.48 = \frac{\quad}{100}$$

$$2 \frac{48}{100}$$

$$2 \frac{12}{25}$$

write as  
fraction  
in  
simplest  
form

## Compare Fractions, Decimals and Percents

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a. Which is greater,  $\frac{3}{20}$  or 16%?

Decimals

$$0.15 < 0.16$$

Percents

$$15\% < 16\%$$

b. Which is greater, 79% or 0.08?

Decimals

$$0.79 > 0.08$$

Percents

$$79\% > 8\%$$

The figure shows the portions of ultraviolet (UV) rays reflected by four different surfaces. How many times more UV rays are reflected by water than by sea foam?



Write 25% and  $\frac{21}{25}$  as decimals.

**Sea foam:**  $25\% = 25.\% = 0.25$       **Water:**  $\frac{21}{25} = \frac{84}{100} = 0.84$

Divide 0.84 by 0.25:  $0.25 \overline{)0.84} \rightarrow 25 \overline{)84.00}$

••• So, water reflects about 3.4 times more UV rays than sea foam.

## Compare Fractions, Decimals and Percents

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You, your sister, and a friend each take the same number of shots at a soccer goal. You make 72% of your shots, your sister makes  $\frac{19}{25}$  of her shots, and your friend makes 0.67 of his shots. Who made the fewest shots?

72%

72%

$\frac{19}{25}$

76%

0.67

67%

Your Friend

# Homework

Page 218 #1-6, 7-29 odd  
35-39 (skip 38d)

Page 224 #4-14 even 22-29

23.5%

1st: 0.235

↑  
place value  
1000<sup>ths</sup>

$$\frac{235}{1000}$$

Simplify







