

Objective:
Review solving
problems with
percents.

Solving Percents

Agenda

Warm-Up (Tuesday)

Anna helps her grandmother at the Farmer's Market. A mixed variety of apples are sold in crates of 20. In each crate of 20, there are usually 3 Granny Smith apples. If Anna sells 15 crates of apples, how many Granny Smith apples did she sell?

Warm-Up

HW Check

Notes p.17

HW: Practice
#5-11 ALL

Progress
Reports
due Friday!!

45 g.s.
apples

W	O	N
G.S. apples 3		X
total	20	15 · 20 = 300 900 = 20X

Write each percent as a decimal ~~and a fraction~~

d) 52%

e) 112%

f) 6%

→ 52

1.12

→ 06

Homework Check

Answers:

1. $t = 11$
2. $y = 2$
3. 45 ft
4. 10.5 inches
5. 360 bottles of diet coke
6. $p = 5$
7. $a = 9$
8. $x = 4.5$ m
9. A. 3.75 miles
B. 4.5 miles
10. 3.5 cups
11. A. Drawing
B. 17.5 m
C. 9 m

~~Test Averages~~

2nd - 67

3rd - 61

4th - 52

5th - 63

7th - 44

Please sign up for
tutorials if you
haven't already

Algebra I - Unit 1: Topic 3 - Solving Proportions

Practice - Solving Proportions

pp 114-120

Name _____

Date _____

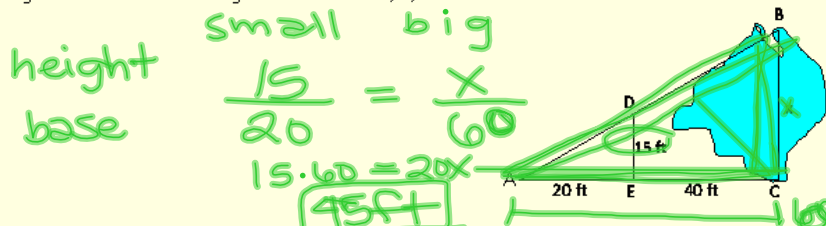
Per _____

Solve each proportion.

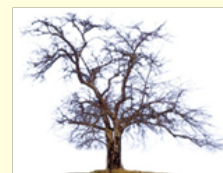
1. $\frac{t-5}{4} = \frac{3}{2}$

2. $\frac{1}{y-3} = \frac{3}{y-5}$

3. Triangle
- ABC
- is similar to Triangle
- ADE
- . What is
- x
- , the distance across the lake from Point
- B
- to Point
- C
- ?



4. A museum has scale models representing different time periods in history. A scale in which one inch in the model represents two feet is used to construct the models. The museum's sculptor wants to build a model of an 21-foot-tall tree for one of the exhibits. How tall should she make the model of the tree?



5. STOP MART received a delivery of 1080 bottles of Coke and Diet Coke. If the ratio of Coke delivered to Diet Coke delivered was 6:3, how many bottles of Diet Coke were delivered?

Diet $\frac{x}{1080} = \frac{3}{9}$

6. $\frac{(6p-2)}{7} = \frac{(5p+7)}{8}$

7. $\frac{(a-3)}{8} = \frac{3}{4}$

$8(6p-2) = 7(5p+7)$

$48p-16 = 35p+49$

$-35p$ $-35p$

$13p-16 = 49$

$+16$ $+16$

$13p = 65$

$\frac{13p}{13} = \frac{65}{13}$

$p = \frac{65}{13}$

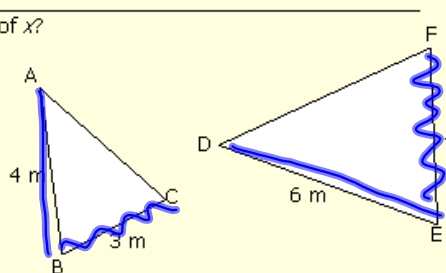
$p = 5$

Algebra I – Unit 1: Topic 3 – Solving Proportions



8. Triangle ABC is similar to Triangle DEF . What is the value of x ?

$$\frac{4}{6} = \frac{3}{x}$$



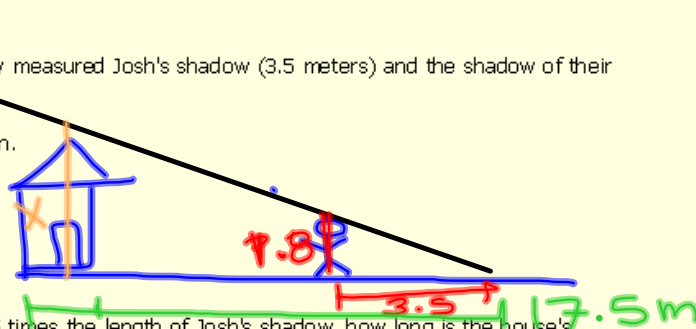
9. Marlene can walk $2\frac{1}{2}$ miles in 40 minutes. Determine how far she can walk in one hour.

B. Marlene increases her rate to 3 miles in 40 minutes. At this current rate, how far will she walk in one hour?

10. Vince is making cookies for his Single Survival class. The recipe he is using requires 1 cup of milk for 8 servings. If he wants to make enough cookies for 28 servings, how much milk will Vince need?

11. Josh is 1.8 meters tall. On a sunny day, Lenny measured Josh's shadow (3.5 meters) and the shadow of their house at the same time.

A. Draw a picture to represent the situation.



- B. If the length of the house's shadow is 5 times the length of Josh's shadow, how long is the house's shadow?

$$5(3.5) = 17.5m$$

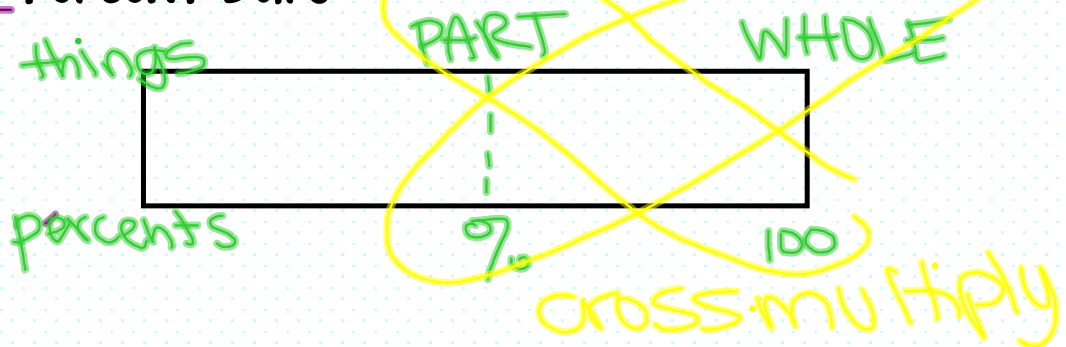
C. What is the height of the house?

$$\frac{x}{1.8} = \frac{17.5}{3.5}$$

$$x = 9m$$

Solving Percents p. 19

Method 1: Percent Bars



Method 2: Proportion Method

$$\frac{\text{PART}}{\text{WHOLE}} = \frac{9\%}{100}$$

Summary:

Percents examples

1. The average American eats 15 slices of pepperoni pizza per month. If the total monthly pizza consumption of the average American is 50 slices, what percent of the pizza eaten is pepperoni?

$$\frac{15}{50} = \frac{x}{100}$$

$$150 = 50x$$

$$x = 30\%$$

2. A 15% tip is automatically added to the bill at a restaurant when there are more than 6 people in the party. The eight members of the Bernardo family eat dinner together at Pizza Palace. Their bill totals \$156.00 before the tip is added.

- A. How much tip will Pizza Palace add to their bill?

$$156 \times \frac{15}{100} = 23.40$$

- B. What will be the Bernardo family's total bill?

$$156 + 23.40 = 179.40$$

- C. Mrs. Bernardo works at a local department store. She earns \$2,600 each month. The Pizza Palace dinner bill (including tip) is what percent of Mrs. Bernardo's monthly salary?

$$\frac{179.40}{2600} = \frac{x}{100}$$

$$x = 6.9\%$$

3. A car salesman earns a 3.5% commission on every car he sells. If he received \$875 for the last car he sold, what was the selling price of the car?

$$875 = 3.5\% \times \text{price}$$

$$875 = 0.035 \times \text{price}$$

$$\text{price} = \frac{875}{0.035} = 25,000$$

4. Andre saves 30% of his total weekly earnings from his 2 part-time jobs. He earns \$6.75 per hour at his first job and \$5.55 per hour at his second job. Andre works 20 hours this week at his first job and 10 hours this week at his second job. How much will Andre save this week?

Malearnings

$$1) 6.75(20) = 135.00$$

$$2) 5.55(10) = 55.50$$

$$190.50$$

5. Mabel agreed to pay the tax and tip for dinner at a restaurant with her four friends. Each of the friends paid an equal part of the cost of the dinner, which was \$96. If the tax and tip together were 20% of the cost of the meal, Mabel paid how much less than any one of her friends?

$$\frac{x}{96} = \frac{20}{100}$$

$$x = 19.20$$

cost shared by friends:

$$96 \div 4 = 24$$

Savings:

$$24 - 19.20 = 4.80$$
 saved

#5-11

Practice - Percents

pp 127-137

Name: _____ Date: _____ Per: _____

1. On Wednesday, Tom's Nursery received a shipment of 60 flowering crabapple trees. Tom had ordered 80 trees. What percent of his order arrived on Wednesday?
2. Karolan received a commission of 5% on the sale of a house. If the amount of her commission was \$4780, what was the selling price of the house?
3. Kristi invested \$5000 in a savings account at her bank at a rate of 3.5% for 5 years.
 - a. How much interest did she earn?
 - b. What was her total at the end of 5 years?
4. How long would Edward need to invest his money if he wanted to earn \$2160 in interest after depositing \$6000 in an investment account at a rate of 8%?
5. A police department reported that approximately 95% of the alarm calls they get each day are false alarms. If they receive 120 alarm calls in one day, about how many of them would not be false alarms?

Algebra I - Unit 1: Topic 3

6. The table below lists the number of dogs of each of the different breeds a store sold in one year.

Dog Sales

Breed	Number Sold	% Sold
Cocker Spaniel	48	
German Shepherd	21	
Miniature Schnauzer	45	
Beagle	36	

A. Fill in the table to show the percent of each breed of dog the pet store sold in one year.

B. Using the percentage rates you found in the table, how many beagles could the store expect to sell if they sell 200 dogs next year?

7. A car dealership is selling a used vehicle for \$8,500. What would be the price of the vehicle with a sales tax of 7.5%?
8. There are approximately 1,500,000 enlisted women and men in the United States military. Of this number, approximately 420,000 are over the age of 35. What is the approximate percent of enlisted personnel over the age of 35?
9. The East High School gym needs to be painted. The painters estimated that it would take about 20 hours for them to paint the entire gym. If they have already worked for five hours, what percent of the entire job have they finished?
10. Abbie's goal is to collect 200 different kinds of butterflies for her collection. So far, she has collected 67% of her goal. What is the number of butterflies she has collected?
11. Mr. Garcia's restaurant bill with tax was \$35.00. He wants to leave the waiter a 15% tip. How much money will Mr. Garcia leave including the tip?

