

Name: _____

Date: _____

Notes

Algebra Section 3.7

Pages 176-181



Goal: "I will solve percent problems"



Percent as a Proportion:

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

and

$$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

and

$$\frac{\text{change}}{\text{original}} = \frac{\%}{100}$$

Examples:

What number is 30% of 90?

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100} \quad \frac{x}{90} = \frac{30}{100}$$

Solve: $100x = 2700$
 $x = 27$

What percent of 136 is 51?

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

$$\frac{51}{136} = \frac{x}{100}$$

$$5100 = 136x$$

$$37.5 = x$$

$$37.5\%$$

Try These:

Ex: 20 is 12.5% of what number?

Ex: What percent of 56 is 49?

Ex: What percent of 55 is 11?

Ex: What number is 45% of 92?

Ex: What number is 140% of 50?

Ex: What number is 12% of 85?

Word Problems:

Ex: A survey asked 220 students to name their favorite pasta dish. Find the percent of students who chose the given dish.

a) Mac N' Cheese

Type	# Students
Spaghetti	83
Lasagna	40
Mac N' Cheese	33
Fettuccine Alfredo	22
Baked Ziti	16
Pasta Primavera	15
Other	11

b) Lasagna

Ex: 30% of the school is wearing hats today. If 120 students are wearing hats, how many students are in the school?

Ex: There are 36,000 seats in the stadium. 25% of the seats are preferred seating. How many seats are preferred seating?

Ex: 68 of my students earned higher than a B on their report card. That is 80% of my students. How many students do I have?

Percent Change:

To find percent of change: $\frac{\text{change}}{\text{original}} = \frac{\%}{100}$

To find the change: _____

The original is _____

You must include _____ or _____ in your final answer.

Ex: A shirt was put on sale. Its original price was \$35 and it was sold for \$30. What was the percent of the sale?

Ex: A store buys jeans for \$20 and sells them for \$35 each. Find the percent of the mark-up.

Ex: Find the percent of change if a school's enrollment was 675 students last year and is 725 students this year.

Ex: A house sold for \$250,000 in 2000. Last year it sold for \$360,000. What was the percent change?