Name:_____ Date:_____

Notes
Algebra Section 3.7
Pages 176-181

Goal: "I will solve percent problems"

Percent as a Proportion:

$\frac{is}{of} = \frac{\%}{100}$ and $\frac{part}{whole} = \frac{\%}{100}$ and $\frac{change}{original} = \frac{\%}{100}$

Examples:

What number is 30% of 90?

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

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

What percent of 136 is 51?

$\frac{is}{of} = \frac{\%}{100}$ $\frac{51}{136} = \frac{x}{100}$

$5100 = 136x$
$37.5 = x$

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

b) Lasagna

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

Ex: A survey asked students how much they would tip for a $28 meal. Find the percent of students who would tip:

a) $4.20

b) at least $5.00

c) $5.60

Amount of Tip	# Students
$2.00	19
$2.80	28
$3.00	45
$4.20	36
$5.00	47
$5.60	8

*What is the appropriate amount to leave for a tip if the service was adequate?

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 10,240 people sitting in preferred seating. This is 25% of the stadium's capacity. What is the stadium's capacity?

Percent Change:

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

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?