

Warm up:

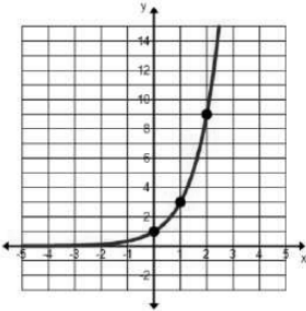
Write an equation to represent each pattern

1. Rachel is making cookies for her friends. Her mom had already made 24 cookies. After 3, 4, and 5 hours of baking, she had 69, 84, and 99 cookies, respectively.

2.

x	y
1	48
2	24
3	12
4	6

3.



NOTES:

1. You are on a date at Chili's and they bring the check. The cost for your meal was \$34.

a. If you are going to give a 20% tip, how much will the tip be?

$$34 \times 0.2 = \$6.80 \quad 20\% = .2$$

b. What is the total cost (including the tip)?

$$6.80 + 34 = \$40.80 \quad \frac{20}{100} = .2$$

2. You go on another date and leave a 15% tip. The total cost (including the tip) was \$46. Write an equation that represents this situation (let x be the cost of the meal without tip).

$$1x + (.15)x = 46$$

$$(1.15)x = 46$$

$$\text{meal} + \text{tip} = 46$$

$$\frac{15}{100} = .15$$

3. Elizabeth is out shopping and the shirt she wants originally cost \$16.00. Luckily, it is on sale for 40% off. What is her total cost at check out? (Assume she is in Oregon where there is no sales tax)

$$16(1 - .4)$$

$$16(.6)$$

$$40\% = .4$$

4. Danielle bought a house for \$900,000, fixed it up, and sold it. She made a 25% profit. How much money did she make? How much the house sold for.

$$900,000(1.25)$$

$$900,000(1 + .25)$$

5. Ben has decided to sell his collection of baseball cards. He started with 80 cards and sold off 75% of the collection. How many cards does he have left?

$$80(1 - .75)$$

$$80(.25) = 20$$

Helpful tools:

To write a percent as a decimal, ~~move the decimal place~~ divide by 100.

For example,

20% becomes
 3% becomes

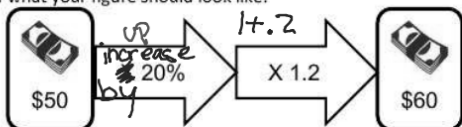
If percent increase then I multiply by $1 + \%$

If percent decrease then I multiply by $1 - \%$

% is written as a decimal

In the figure below, record how to go from one amount to the other in the direction the arrows are pointing with a decimal in one arrow and a percent in the other arrow.

Here is an example of what your figure should look like:



You should fill out each arrow with the corresponding decimals and percents on the cards you used to solve this with your group.

