

Percent of Change

Agenda

Warm-Up

HW Check

Notes p.19

HW #1-13

Reminders

Quiz tomorrow!

Signed PR & HW
1.4 due Friday

Test Corrections

Essential Question

How do I calculate
the percent of
increase or
decrease?

Warm-Up Wednesday

1. Solve for m.

$$\frac{(2m-3)}{-2} = \frac{(m+4)}{3}$$

$$3(2m-3) = -2(m+4)$$

$$\begin{array}{r} +6m - 9 \\ \hline 8m - 9 = -2m - 8 \\ +2m + 9 \\ \hline 8m = 1 \\ \frac{8m}{8} = \frac{1}{8} \end{array}$$

2. Evaluate if $x = -2$ and $y = \frac{2}{3}$

$$\frac{x^2 + 3y + 2}{-2}$$

$$\frac{(-2)^2 + 3\left(\frac{2}{3}\right) + 2}{-2} = \frac{8}{-2} = \boxed{-4}$$

Homework Check - Percents

1. 75%

2. \$95,600

3. OMIT

4. OMIT

5. 6 calls

6. A

Breed	Number Sold	% Sold
Cocker Spaniel	48	32%
German Shepherd	21	14%
Miniature Schnauzer	45	30%
Beagle	36	24%

B. 48 beagles

7. A. 48%

B. 200 dramas

8. \$9,137.50

9. 28%

10. 25%

11. 134 butterflies

12. \$40.25

Algebra I- Unit 1: Topic 3- Percents

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. Karen 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 Jeff 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?

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

Dog Sales

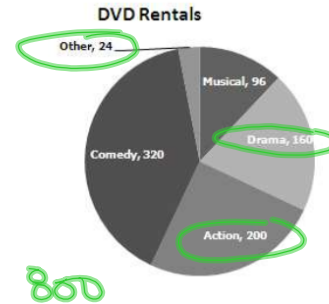
Breed	Number Sold	% Sold
Cocker Spaniel	48	
German Shepherd	21	
Miniature Schnauzer	45	
Beagle	36	

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?

Algebra I- Unit 1: Topic 3- Percents

7. The graph below shows DVD rentals from a Redbox kiosk during one week.



A. What percentage of rentals were not musicals or comedies?

$$\frac{384}{800} \times 100$$

B. If 1000 DVDs are rented next week, how many would you predict to be dramas?

$$\frac{\text{dramas}}{\text{total}} = \frac{150}{800} = \frac{x}{1000}$$

8. 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%?

$$\begin{array}{r} 8500 \\ \times 7.5 \\ \hline \end{array}$$

tax: \$637.50

$$\begin{array}{r} 8500 \\ + 637.50 \\ \hline \end{array}$$

\$9137.50

9. 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?

10. 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?

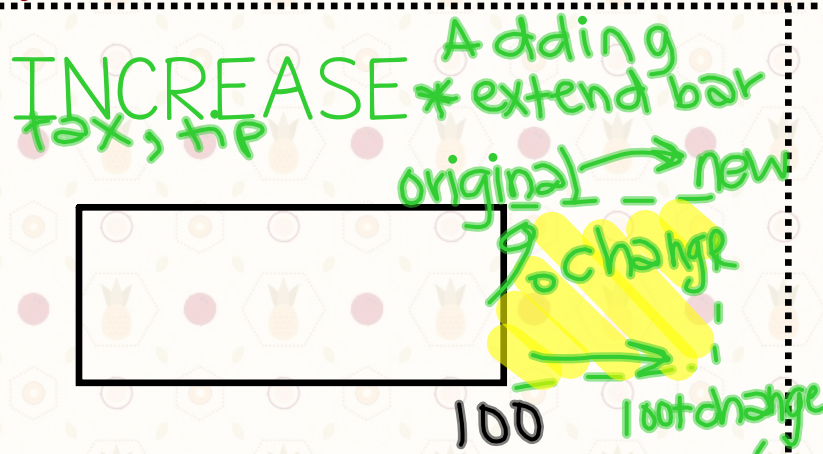
11. Shirley's goal is to collect 200 different kinds of butterflies for her collection. So far, she has collected 67% of her goal. What is the number of butterflies she has collected?

12. 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?

Percent of Change p.79

Essential
question

How do I calculate the percent of increase or decrease?

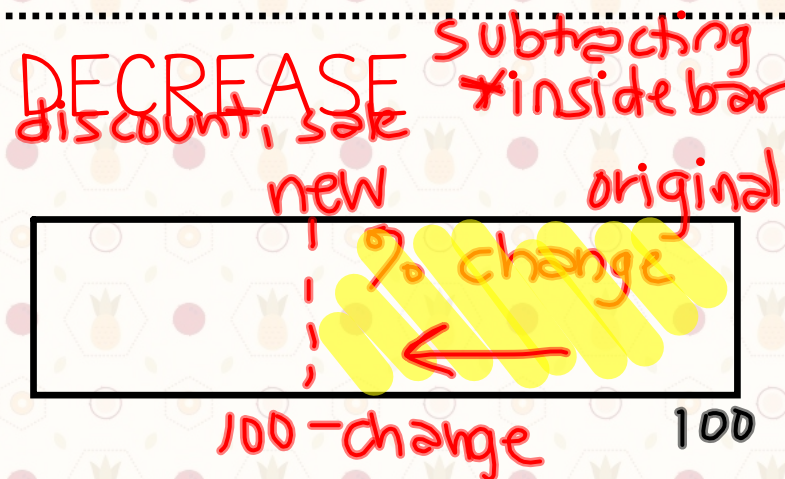


EX 1. Mrs. Moore's class started with 25 students in it, and now it has 28 students in it. By what percent did it increase?

$$\frac{28}{25} = \frac{2800}{2500} = \frac{26x}{25}$$

$$112 = x$$

12% increase



EX 2. There was a sale going on at the Jean Shop. A pair of jeans that had been priced at \$45 is now on sale for \$30. What is the percent discount?

$$\frac{30}{45} = \frac{3000}{4500} = \frac{45x}{45}$$

$$66.7 = x$$

$$100 - 66.7 = 33.3\%$$

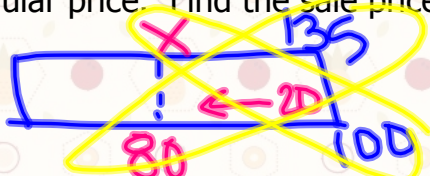
discount

Percent of Change p.19

Essential Question

How do I calculate the percent of increase or decrease?

1. The Just For Fun Sporting Goods Store advertises that all in-line skates are on sale for 20% off the regular price. Find the sale price of a pair of in-line skates that cost \$135. *decrease*



$$100x = 135.80$$

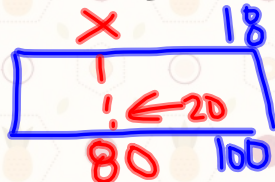
$$x = \$108$$

2. Mr. Hanson owns a bookstore. He buys used books at 25% of the cover price and sells them at 45% mark up of what he paid. Jerry sold Mr. Hanson 3 books with cover prices of \$7.95, \$5.95, and \$12.10. If Jerry bought back all three of his books, how much would he have to pay?

#4 on p.18

3. ~~Antonio and his two brothers~~ equally shared the cost of a new CD with a list price of \$18. They received a 20% discount off the list price and paid 8.25% sales tax on the discounted price. Find the approximate amount that each of the 3 brothers paid toward the cost of the Cd.

a. discount *dec.*



$$\$14.40$$

b. tax *inc.*



$$\$15.58$$

c. split $\div 3$

$$\$5.20$$

Remember: Answer key will be posted @MsKmath
Wed PM ✓
No tutoring tmr AM or PM!

Algebra I - Unit 1: Topic 3 – Percent of Change

Practice - Percent of Change**pp 138-143**

Name _____ Date _____ Per _____

1. Which of these represents a 15% increase?
 - A The value of an antique went from \$60 to \$90.
 - B The price of movie tickets rose from \$7.20 to \$9.00.
 - C Alisha's hourly wage went from \$8.00 to \$9.20.
 - D The price of two rounds of putt-putt golf increased from \$10 to \$12.50.
2. A book bag is on sale for \$19.05 down from the original price of \$25.40. By what percent has the book bag been marked down?
3. A movie matinee ticket at a local theater costs 20% less than the regular price. If a movie matinee ticket costs \$5.00, what is the regular price?
4. The original price of an item was \$200. During a sale, the price was reduced by 45%. Then, during a clearance sale, the price was reduced to a final sale price of \$88. What percent was the item discounted during the clearance sale?
5. Original selling price of a new sports video was \$65.00. Due to demand the price was increased to \$87.75. What was the percent of increase over the original price?
6. The table below shows how the number of state government jobs held by people who live in San Antonio, Texas, decreased from January to July of 2002.

Month	Number of Jobs
January	15,400
July	14,800

What percent did the number of government jobs held by people who live in San Antonio, Texas, decrease during this time period?

Algebra I - Unit 1: Topic 3 – Percent of Change

7. Juan received a raise. If his hourly wage increased from \$6.50 to \$6.89, by what percent did his hourly wage increase?
8. A store pays \$79 for a CD player, which it then sells for \$144.30. What is the percent markup from the original price?
9. Greg is buying soft drinks for a class party. He discovers that one case of drinks costs \$6.79. However, if he buys 20 cases or more, he will receive a 10% discount. A reasonable conclusion about the price for 20 cases would be _____.
 - A. more than \$140
 - B. between \$130 and \$140
 - C. between \$120 and \$130
 - D. less than \$120
10. Airfare prices are predicted to increase 8% this winter. How much will a ticket to New York which now sells for \$419.90 cost this coming January?
11. Grocery prices are expected to increase 4% during the next year. Approximately how much will a family which now spends \$159.50 per week for groceries expect to pay at the increased rate?
12. On a typical day, sanitation workers collect about 170 million tons of household garbage. It is expected that the amount collected will grow approximately 2% annually over the next several years. If that forecast is correct, about how many tons of household garbage will be collected on a typical day next year?
13. Review:
Write an expression for the verbal statement:

ten less than twice a number

