

Percent of Change Worksheet

Name Key
Period _____

Directions: State whether each percent of change is a percent increase or a percent decrease. Then find the percent of increase or decrease. Round to the nearest whole percent.

1. Original: \$100
New: \$59

$$\frac{59-100}{100} = \frac{-41}{100} = -0.41$$

$.41(100) = 41\%$ decrease

2. Original: 324 people
New: 549 people

$$\frac{549-324}{324} = \frac{225}{324} = 0.694$$

$0.694(100) = 69\%$ increase

3. Original: 58 Homes
New: 152 Homes

$$\frac{152-58}{58} = \frac{94}{58} = 1.62$$

$1.62(100) = 162\%$ increase

4. Original: 66 Dimes
New: 30 Dimes

$$\frac{30-66}{66} = \frac{-36}{66} = -0.545$$

$0.545(100) = 55\%$ decrease

5. Original: \$53
New: \$75

$$\frac{75-53}{53} = \frac{22}{53} = 0.415$$

$0.415(100) = 42\%$ increase

6. Original: 15.6 liters
New: 11.4 liters

$$\frac{11.4-15.6}{15.6} = \frac{-4.2}{15.6} = -0.269$$

$0.269(100) = 27\%$ decrease

7. Original: \$3.78
New: \$2.50

$$\frac{2.50-3.78}{3.78} = \frac{-1.28}{3.78} = -0.339$$

$0.339(100) = 34\%$ decrease

8. Original: 231.2 mph
New: 236.4 mph

$$\frac{236.4-231.2}{231.2} = \frac{5.2}{231.2} = 0.022$$

$0.022(100) = 2\%$ increase

Directions: Find the final price of each item. When there is a discount and sales tax, first compute the discount price and then compute the sales tax and final price.

9. DVD: \$219
sales tax: 6.5%

$$\$219(1.065) = \$233.24$$

10. jeans: \$39.99
discount: 15%
sales tax: 4%

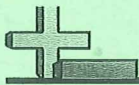
Discount Price
 $39.99 - 39.99(0.15)$
 $= 33.99$
Plus tax: $33.99(1.04)$
 $= \$35.35$

11. book: \$19.95
discount: 5%
sales tax: 5%

Discount Price: $19.95 - 19.95(0.05)$
 $= 18.95$
Plus Tax: $18.95(1.05) = \$19.90$

12. tickets: \$52.50
sales tax: 7%

$\$52.50(1.07) = 56.18$
 $\$56.18$



Solve each problem.

Answers

- 1) In February Roger spent 44 hours watching Netflix. In March he only spent 25.52 hours watching. What was the percent decrease in the amount of time he spent watching?

$$\frac{\text{Change}}{\text{Initial}} = \frac{44 - 25.52}{44} = 0.42$$

$$0.42(100) = 42\% \text{ decrease}$$

$$\frac{\text{New}}{\text{Old}} = \frac{25.52}{44} = 0.58$$

1. 42%

- 2) At a restaurant the bill came to \$54.00. If you leave \$61.56, what percent tip is that?

$$\frac{\text{Change}}{\text{Initial}} = \frac{61.56 - 54}{54} = 0.14$$

$$0.14(100) = 14\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{61.56}{54} = 1.14$$

2. 14%

- 3) A library normally collected \$56.00 in fees a month. But in March they collected \$84.00. What is the percent increase in the number of fees collected in March?

$$\frac{\text{Change}}{\text{Initial}} = \frac{84 - 56}{56} = 0.5$$

$$0.5(100) = 50\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{84}{56} = 1.5$$

3. 50%

- 4) A pole was supposed to be 14 meters long, but it was accidentally made 21 meters long. The pole is _____ percent longer than it needs to be.

$$\frac{\text{Change}}{\text{Initial}} = \frac{21 - 14}{14} = 0.5$$

$$0.5(100) = 50\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{21}{14} = 1.5$$

4. 50%

- 5) The price for internet on a phone was \$10.00 a month, but starting in November the price will be \$13.20 a month. This is a _____% increase.

$$\frac{\text{Change}}{\text{Initial}} = \frac{13.2 - 10}{10} = 0.32$$

$$0.32(100) = 32\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{13.2}{10} = 1.32$$

5. 32%

- 6) Last year a fishing license cost \$59.00. This year the license will cost \$44.84. This is a _____ percent decrease.

$$\frac{\text{Change}}{\text{Initial}} = \frac{59 - 44.84}{59} = 0.24$$

$$0.24(100) = 24\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{44.84}{59} = 0.76$$

6. 24%

- 7) A store sold 13.00 dollars worth of gift cards in October. The next month the goal was to sell \$17.16 worth of gift cards. This is an increase of _____ percent.

$$\frac{\text{Change}}{\text{Initial}} = \frac{17.16 - 13}{13} = 0.32$$

$$0.32(100) = 32\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{17.16}{13} = 1.32$$

7. 32%

- 8) Isabel's family decided to get rid of their cable TV. Originally they were paying \$143.00 for the TV, internet and phone, but now they're paying \$125.84. What was the percent the bill decreased by?

$$\frac{\text{Change}}{\text{Initial}} = \frac{143 - 125.84}{143} = 0.12$$

$$0.12(100) = 12\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{125.84}{143} = 0.88$$

8. 12%

- 9) A store normally averaged 102 customers a day. But on the weekends they averaged 75.48 customers a day. What is the percent decrease in the number of customers?

$$\frac{\text{Change}}{\text{Initial}} = \frac{102 - 75.48}{102} = 0.26$$

$$0.26(100) = 26\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{75.48}{102} = 0.74$$

9. 26%

- 10) Normally a game costs \$33.00. But the new special edition version is going to be \$39.60. This is an increase of _____ percent.

$$\frac{\text{Change}}{\text{Initial}} = \frac{39.60 - 33}{33} = 0.20$$

$$0.20(100) = 20\%$$

$$\frac{\text{New}}{\text{Old}} = \frac{39.6}{33} = 1.2$$

10. 20%