

Name _____

Date _____

Unit 11 Review Sheet - Percents

1. State whether each expression represents an increase or a decrease and by what percent.

i.) $1.35x$

ii.) $0.65x$

iii.) $120\%x$

iv.) $72\%x$

2. If d represents the cost of an item, what could $1.075(0.20d)$ represent?

A. 20% discount, 7.5% tax B. 20% discount, 107.5% tax C. 80% discount, 7.5% tax D. 7.5% discount, 20% tax

3. Write a situation that would result in the expression $1.09(0.80x)$.

4. The population of a city is expected to increase by 7.5% next year. If m represents the current population, which expression represents the expected population next year?

A. $1.75m$

B. $1 + 0.075m$

C. $p + 0.075$

D. $1.075m$

5. A person earned \$5500 on the sale of a house costing \$424,000. What was the rate of commission earned?

6. Last year, the state assessment had 80 questions on it. This year, the state assessment will have 20% more questions. How many questions will be on the assessment this year?

7. The selling price of a pair of pants is \$60. The price David paid for the pants included a 7% sales tax. Which expression can be used to calculate the tax on the pair of pants?

A. $60 + 60(0.07)$

B. $60(0.07)$

C. $60(1.07)$

D. $60(0.93)$

8. A local factory sells candy to Sweet Flights Candy Store. The factory sells large Valentine's Day Bears for \$20.00. Sweet Flights uses a 30% markup on their prices.

a.) What does Sweet Flights charge for the bear?

b.) If you buy three bears and pay 5% tax, how much do you spend?

9.) In 2017, Mr. Scott had 120 total students. By 2018, the number of students had increased by 20%. By 2019, the number of students decreased by 5%. How many students did he have in 2019?

10.) The Roslyn Bulldogs had 4 strikeouts last year. This year, they had 10 strikeouts. What is the percent of increase from last year to this year?

11.) There are 800 students in Roslyn Middle School. If 55% of them are male, which equation below shows the equation that would solve how many are not male?

- A. $N = 0.55(800)$ B. $N = 0.45(800)$ C. $800 = 0.55N$ D. $800 = 0.45N$

12.) If an item is discounted by 25% then the sale price of the item is:

- A. 75% of the price B. 125% of the price C. $\frac{1}{4}$ of the price D. 25% of the price

13.) John goes to pay for his sneakers. The expression that represents his total bill is 0.60s. Which statement below is false?

- A. John received a 40% discount. B. John paid 60% of the bill.
C. John paid 40% of the bill. D. Sally's bill was marked down by 40%.

14.) If an item is discounted by 30%, then the sale price of the item is:

- A. 70% of the price. B. 130% of the price
C. $\frac{1}{3}$ of the original price. D. 30% of the original price

15.) Naomi invested \$140. She earned 3% interest annually on the initial investment. How much interest did Naomi earn after three years?

- a. \$152.60 b. \$12.60 c. \$4.20 d. \$144.420

16.) David bought a computer that was 15% off the regular price of \$1,080. After, a 7% sales tax was added to the cost of the computer. What was the total price that David paid?

17.) A group of friends went to lunch. The bill was \$40. They decided to leave a 20% tip on the total bill. Which of the following expressions would calculate the total cost of the bill?

- I. $40(0.20)$ II. $40(1.20)$ III. $40 + 40(0.20)$

- A. I only B. I and II C. II and III D. I, II and III

18.) A TV is listed at \$950. It is on sale for 15% off. What is the discount?

19.) An item at a store is purchased for \$20. It is then marked up by 40%. What is the new price of the item?

20.) Andrew invests \$550 in an account at 3.25% simple interest.

a.) How much interest will he earn after 4 years?

b.) How much will be in his account after 4 years?