

**Standards**

**A.SSE.1** Interpret expressions that represent a quantity in terms of its context.  
**A.SSE.1a.** Interpret parts of an expression, such as terms, factors, and coefficients (Emphasis on linear expressions and exponential expressions with integer exponents.)  
**A.SSE.1b.** Interpret complicated expressions by viewing one or more of their parts as a single entity.  
**N.Q.1.** Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays  
**N.Q.2.** Define appropriate quantities for the purpose of descriptive modeling.  
**N.Q.3.** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.  
**A.CED.1** Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and exponential functions.  
**A.CED.3** Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.

1. Given  $2(x + 4) - 3$ , state the constant.
2. Given  $5x - 3x(x - 6)$ , list the terms.
3. Translate into words:  $10x - 0.25(10x)$
4. Convert 55 mph to feet per seconds.
5. Convert 96 months to years.
6. The calculator order was placed the other day. The calculators cost \$15 each and \$8.99 for shipping was added to the order. The tax charged was 7%. If the total purchase amount was \$1424.88, determine how many calculators were ordered. Find the equation to solve the given scenario.
7. In problem #6, if the answer was  $x = 88.21744548$ , how would you interpret this answer?
8. Parker is ordering t-shirts for his club at school as a fundraiser. The design fee is \$25 and the t-shirts cost \$7.99 each including tax and shipping. Since he is ordering for a school, he gets a 20% discount on the t-shirts. The president said he must order more than \$200 worth for the club to make a profit when they resell them. How many t-shirts must he order to be able to make a profit? Find the inequality to use for the give scenario.
9.  $V = lwh$ ; solve for h

10. Given the function,  $f(x) = 2x - 5$ , and a domain of  $\{1, 2, 3, 4\}$ , what is the range?

11. You and your friends decide to go eat pizza Friday night. You will have to pay \$1.25 a slice.

$$f(x) = 1.25x$$

$$f(3) =$$

Interpret:

12. Which equation represents the pattern in the table?

a.  $f(x) = 20x - 3$

b.  $f(x) = -3x + 20$

c.  $f(x) = 20x + 3$

d.  $f(x) = 3x - 20$

x	y
0	20
1	17
2	14

13. Marty finds her roses multiply each year. After one year she had 50 roses. Two years later she had 65. Year three she noticed 80 roses. Year four had a total of 95 roses. Find a linear function to model the growth of Marty's roses.

Identify your ordered pairs:

Properties and Proofs. Name the property used to turn each equation into the next one.

14.  $6x - 5(x + 4) = 12 \rightarrow 6x - 5x - 20 = 12$

A. Addition Property of Equality

B. Subtraction Property of Equality

C. Distributive Property of Equality

15.  $3(5x - 3) = 21 \rightarrow 5x - 3 = 7$

A. Division Property of Equality of Equality

B. Combine like Terms

C. Multiplication Property of Equality

16. Apply the symmetric property to  $28 = 10 - 6x$ . What is the result?

A.  $-28 = 10 - 6x$

B.  $10 - 6x = 28$

C.  $6 - 10x = 28$

D.  $28 = 10 - 6x$

17. Apply the multiplication property ( $\cdot 3$ ) to  $\frac{4}{3}x + 1 = 5$ . What is the result?

A.  $4x + 3 = 15$

B.  $12x + 1 = 5$

C.  $12x + 3 = 15$

D.  $5 = \frac{4}{3}x + 1$