Write Linear Equations and Inequalities (Unit 3)

Name: _____ **Date:** _____

1. In a particular triangle, the second side measures 8 more than three times the first side (x), and the third side measures 5 less than the second side. In terms of x, what is the perimeter?

2. The Pretty Pool company is building a pool in Michael's back yard. The pool is to be 8 ft longer than it is wide and cover 240 square feet of the back yard. Write an equation that represents the situation if x is the width of the pool.

3. Bill is making a garden that is twice as long as it is wide. He wants to cover 288 square feet with the garden. Write an equation that represents the situation if X represents the length of the garden.

4. Amir takes 5 hours to do a job. If Chani helps him they complete the job in 3 hours. How many hours would it take Chani to do the same job if she were working alone?

5. It takes Rick 10 hours to paint his main floor. If Marco starts helping him after 3 hours and they work for 4 hours more to complete the painting, then how many hours would it take Marco to paint Rick's main floor if he were working alone?

6. Twelve more than a number x is less than three times the number. Write an inequality that represents this information.

7. Five less than twice a number x is greater then the number itself. Write an inequality that represents this information.

8. Three times a number n is greater than 8 more than the number. Write an inequality that represents this information.

9. Seven more than twice a number y is at least three times the number. Write an inequality that represents this information.

10. Larry has 7 more dimes than nickels, for a total value of \$1.45. If n represents the number of nickels, what equation could be used to find the number of nickels Larry has?

11. Rhonda has \$1.35 in nickels and dimes in her pocket. If she has six more dimes than nickels, what equation can be used to determine x, the number of nickels she has?

12. The ninth grade class at a local high school needs to purchase a park permit for \$250.00 for their upcoming class picnic. Each ninth grader attending the picnic pays \$0.75. Each guest pays \$1.25. If 200 ninth graders attend the picnic, what inequality can be used to determine the number of guests, x, needed to cover the cost of the permit?

13. Three times the sum of a number and four is equal to five times the number, decreased by two. If x represents the number, what equation is a correct translation of the statement?