Review 2-1/2-4
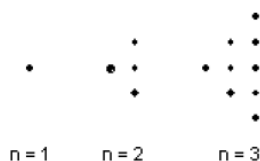
1. The first three members of a sequence are shown. How many dots are in the fourth member of the sequence?

n = 1   n = 2   n = 3

_____

2. Write the next two numbers in the pattern. Describe the pattern.

2, 10, 50, 250, _____ , _____ Describe: _____

3. Write the next two numbers in the pattern. Describe the pattern.

1, 3, 6, 10, _____ , _____ Describe: _____

4. Show the conjecture is false by finding a counterexample.

If the product of two numbers is positive, then the two numbers must be positive.

_____

5. Show the conjecture is false by finding a counterexample.

If $x \leq 6$, then $x < 4$.

_____

6. Write the following statement as a conditional: All football players have a helmet.

   _____

7. Write the following statement as a conditional: The measure of a right angle is 90°.

   _____

8. Write the following statements as a biconditional: If an angle is acute, then its measure is $0° < m < 90°$. If an angles measure is $0° < m < 90°$, then it is an acute angle.

   _____

---

9. If a polygon is a hexagon, then it has six sides. (T or F)

   converse: _____ (T or F)

   inverse: _____ (T or F)

   contrapositve: _____ (T or F)

10. If $x + 3 > 7$, then $x = 8$. (T or F)

   converse: _____ (T or F)

   inverse: _____ (T or F)

   contrapositve: _____ (T or F)

11. Make a valid conclusion in the situation.

    If $x > 5$, then $x + 7 > 11$. The value of x is 8.

    _____

12. Make a valid conclusion in the situation.

    If the game goes into overtime, then Joe will get home late. The game went into overtime.

    _____

13. Make a valid conclusion in the situation.

    If the game goes into overtime, then Joe will get home late. Joe got home late.

    _____

14. Make a valid conclusion in the situation.

    If you run cross country, then you get exercise. If you get exercise, then you will be healthy.

    _____

15. Make a valid conclusion in the situation.

    If $y = 0$, then $2y = 0$. If $2y = 0$, then $2y - 5 = -5$.

    _____