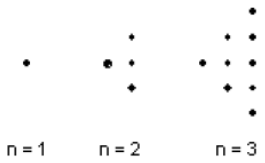
Review 2-1/2-4

1. The first three members of a sequence are shown. How many dots are in the fourth member of the sequence?



_____

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 $2y - 5 = -5$.

_____