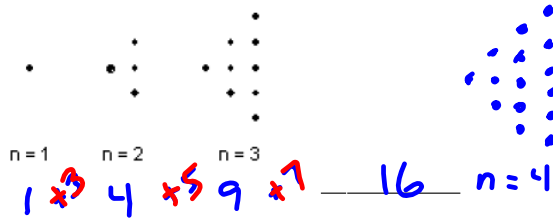


Review 2-1/2-4

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, 1250, 6250 Describe: multiply by 5

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

1, 3, 6, 10, 15, 21 Describe: +2 +3 +4 +5 +6

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.

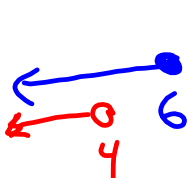
x  $(-1)(-2) = 2$

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

★

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

$6 \leq 6$     $6 \not< 4$    6   4.1   5



41

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

If you are a football player then you have a helmet.

7. Write the following statement as a conditional: The measure of a right angle is  $90^\circ$ .

If an angle is a right angle then its measure is  $90^\circ$ .

8. Write the following statements as a biconditional: If an angle is acute, then its measure is  $0^\circ < m < 90^\circ$ . If an angle's measure is  $0^\circ < m < 90^\circ$ , then it is an acute angle.

An angle is acute if and only if its measure is  $0^\circ < m < 90^\circ$

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

converse: If it has 6 sides, then the polygon is a hex. (T or F)

inverse: If a polygon is not a hexagon, then it does not have six sides. (T or F)

contrapositive: if a polygon doesn't have 6 sides, then it is not a hexagon (T or F)

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

converse: \_\_\_\_\_ (T or F)

inverse: \_\_\_\_\_ (T or F)

contrapositive: \_\_\_\_\_ (T or F)

11. Make a valid conclusion in the situation.

If  $\overset{P}{x > 5}$ , then  $\overset{Q}{x + 7 > 11}$ . The  $\overset{P}{\text{value of } x \text{ is } 8}$ .

$$x + 7 > 11$$

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.

Joe gets home late.

13. Make a valid conclusion in the situation.

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

No Conclusion

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.

If you run cross country then you will be healthy.

15. Make a valid conclusion in the situation.

If  $\overset{P}{y = 0}$ , then  $\overset{Q}{2y = 0}$ . If  $\overset{Q}{2y = 0}$ , then  $\overset{R}{2y - 5 = -5}$ .

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

