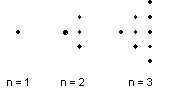
**Geo Ch 2 review**

\_\_\_\_ 1. If the pattern indicated below is continued, what would be the total number of cubes in the 8th stage of the pattern?



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 204 | b. | 194 | c. | 81 | d. | 9 |

\_\_\_\_ 2. The first three members of a sequence are shown. How many dots are in the fourth member of the sequence?



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| a. | 30 | b. | 16 | c. | 14 | d. | 7 |

\_\_\_\_ 3. State a counterexample to disprove the following conjecture:

If a device floats on air, then it is a hot air balloon.

|  |  |
| --- | --- |
| a. | Hot air balloons are red. |
| b. | Helium balloons also float. |
| c. | A car is also a device. |
| d. | Hot air is also warm. |

\_\_\_\_ 4. Rewrite the statement in if-then form.

Every triangle has three sides.

|  |  |
| --- | --- |
| a. | A figure has three sides if and only if it is a triangle. |
| b. | A figure is a triangle if and only if it has three sides. |
| c. | If a figure is a triangle, then it has three sides. |
| d. | If a figure has three sides, then it is a triangle. |

\_\_\_\_ 5. "If , I will succeed." In this conditional statement, the underlined portion is \_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| a. | the hypothesis |
| b. | the converse |
| c. | the argument |
| d. | the conclusion |

\_\_\_\_ 6. Which of the following is an example of the Transitive Property?

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

\_\_\_\_ 7. If *PQ* = 3 and *PQ* + *RS* = 5, then 3 + *RS =* 5 is an example of the \_\_\_\_\_\_\_\_\_\_.

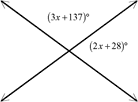
|  |  |
| --- | --- |
| a. | Substitution Property of Equality |
| b. | Multiplication Property of Equality |
| c. | Transitive Property of Equality |
| d. | Reflexive Property of Equality |

\_\_\_\_ 8. Identify the property of congruence.



|  |  |  |  |
| --- | --- | --- | --- |
| a. | Symmetric Property of Congruence | c. | Transitive Property of Congruence |
| b. | Substitution Property | d. | Reflexive Property of Congruence |

\_\_\_\_ 9. Solve for *x*.



|  |  |  |  |
| --- | --- | --- | --- |
| a. | 3 | c. | 1 |
| b. | 6 | d. | 2 |

\_\_\_\_ 10.  form a linear pair. If , what is 

|  |  |  |  |
| --- | --- | --- | --- |
| a. |  | c. |  |
| b. |  | d. |  |

\_\_\_\_ 11. What is the next number in the pattern 

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| a. | -3 | b. | -5 | c. |  | d. | -7 | e. |  |

\_\_\_\_ 12. What is the converse of "If it is raining, then we will not go to the beach?"

|  |  |
| --- | --- |
| a. | If it is not raining, then we will go to the beach. |
| b. | We will go to the beach if and only if it is not raining. |
| c. | If we go to the beach, then it is not raining. |
| d. | If we do not go to the beach, then it is raining. |
| e. | None of the above. |

13. Which of the following is an example of the Transitive Property?

[A] 

[B] If , then .

[C] If  and , then .

[D] If , then  = .

14. Rewrite the statement in if-then form.

Every equilateral triangle has three congruent sides.

[A] A figure has three congruent sides if and only if it is an equilateral triangle.

[B] If a figure is an equilateral triangle, then it has three congruent sides.

[C] If a figure has three congruent sides, then it is an equilateral triangle.

[D] A figure is an equilateral triangle if and only if it has three congruent sides.

15. If the pattern indicated below is continued, what would be the total number of cubes in the 6th stage of the pattern?



[A] 36 [B] 6

[C] 21 [D] 15

16. In the figure shown, **. Which of the following statements is false?



[A]  [B] 

[C]  [D] 

17. Solve for *x*:



[A] 6

[B] 3

[C] 2

[D] 1

18. Solve for *x*:

[A] 5

[B] 2

[C] 7

[D] 4

19. Solve for *x*:



[A] 6

[B] 5

[C] 8

[D] 3

20. Find the next number in the pattern: 5, 7, 10, 14, 19…

[A] 24 [B] 25 [C] 26 [D] 27

21. Find the next number in the pattern: 

[A]  [B]  [C]  [D] 

23. What is the hypothesis of the statement: “If today is Monday, then tomorrow is Tuesday.”?

[A] Tomorrow is Tuesday

[B] Yesterday was Sunday

[C] Today is Wednesday

[D] Today is Tuesday

24. What is the converse to the statement “If today is Monday, then tomorrow is Tuesday.”?

[A] If today is Monday, then tomorrow is Tuesday

[B] If tomorrow is Tuesday, then yesterday was Sunday

[C] If tomorrow is Tuesday, then today is Monday

[D] What day is today?

25. Which is a valid conclusion based on the given statement:

If a triangle has 2 congruent sides, then it is isosceles. Triangle ABC has 2 congruent sides.

[A] If it is a triangle then it has sides

[B] Triangle ABC has 2 sides

[C] ABC is a triangle

[D] Triangle ABC is isosceles

26. Apply the laws of syllogism and detachment:

If the it is more than 80 degrees, then we will go to the beach.

If we go to the beach, then Steve will buy Ice cream.

It is 90 degrees today, therefore…

[A] It is more than 80 degrees.

[B] Man, is it hot out.

[C] we go to the beach.

[D] Steve buys ice cream.

\_\_\_27. 

A) Addition

B) Subtraction

C) Multiplication

D) Division

E) Reflexive

F) Symmetric

G) Transitive

H) Substitution

\_\_\_28. 

\_\_\_29. 

\_\_\_30. 

\_\_\_31. 

\_\_\_32. 

\_\_\_33. 

\_\_\_34. 