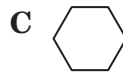
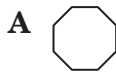


2 Chapter 2 Test, Form 2A

Write the letter for the correct answer in the blank at the right of each question.

1. Make a conjecture about the next object in this sequence.



1. _____

2. If $|n|$ is a positive number, then n is a negative number. Which of the following would be a counterexample?

F -10

G -4

H -1

J 10

2. _____

3. If p is true and q is false, what is the truth value of p and q ?

A true

B false

C 0

D 1

3. _____

For Exercises 4 and 5, use the truth table.

p	q	$\sim q$	$p \wedge \sim q$
T	T		
T	F		
F	T		
F	T		

4. Which would be the values in the $\sim q$ column?

F F F T T

H F T F T

G T T F F

J T F T F

4. _____

5. Which would be the values in the $p \wedge \sim q$ column?

A F T F F

C T T F T

B F T T F

D T F T T

5. _____

6. Identify the conclusion of the statement *Jack will go to school if today is Monday.*

F Jack will go to school

H today is Monday

G Jack will not go to school

J today is not Monday

6. _____

7. Identify the inverse of the following statement.

If $x = 2$, then $x + 3 = 5$.

A If $x + 3 = 5$, then $x = 2$.

C If $x \neq 2$, then $x + 3 \neq 5$.

B If $x + 3 \neq 5$, then $x \neq 2$.

D $x = 2$ and $x + 3 = 5$.

7. _____

8. Identify the contrapositive of the following statement.

If $x = 2$, then $x + 3 = 5$.

F If $x + 3 = 5$, then $x = 2$.

H If $x \neq 2$, then $x + 3 \neq 5$.

G If $x + 3 \neq 5$, then $x \neq 2$.

J $x = 2$ and $x + 3 = 5$.

8. _____

9. What law can be used to determine that the conclusion is valid based on the given statements?

Given: If an angle is acute, then it cannot be obtuse. $\angle A$ is acute.

Conclusion: $\angle A$ cannot be obtuse.

A Law of Detachment

C Law of Converse

B Law of Syllogism

D The conclusion is not valid.

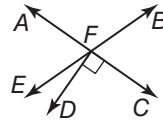
9. _____

2 Chapter 2 Test, Form 2A *(continued)*

10. Which law can be used to determine that the conclusion is valid based on the given statements?
Given: If a figure has 4 right angles, then the figure is a rectangle. A rectangle has 2 pairs of parallel sides.
Conclusion: If a figure has 4 right angles, then the figure has 2 pair of parallel sides.
- | | | |
|---------------------|------------------------------|-----------|
| F Law of Detachment | H Law of Converse | |
| G Law of Syllogism | J The conclusion is invalid. | 10. _____ |
11. Which best describes the statement *If two planes intersect, then their intersection is a point*?
 A always true B sometimes true C never true D cannot tell 11. _____
12. Which of the following is an essential part of a good proof?
 F an if-then statement H using the contrapositive
 G a postulate J deductive reasoning 12. _____
13. Choose the property that justifies the following statement.
 If $x = 2$ and $x + y = 3$, then $2 + y = 3$.
 A Reflexive B Symmetric C Transitive D Substitution 13. _____
14. Choose the property that justifies the statement $m\angle A = m\angle A$.
 F Reflexive G Symmetric H Transitive J Substitution 14. _____
15. Choose the property that justifies the statement *If $\overline{GH} \cong \overline{FD}$, then $\overline{FD} \cong \overline{GH}$* .
 A Reflexive C Transitive
 B Symmetric D Definition of congruent segments 15. _____
16. On a line, if $XY = 6$, $YZ = 4$, and $XZ = 2$, which point is between the other two?
 F X G Y H Z J cannot tell 16. _____

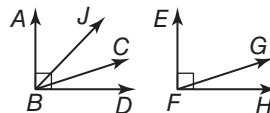
For Exercises 17 and 18, use the figure at the right.

17. If $m\angle BFC = 70$, find $m\angle EFD$.
 A 10 C 35
 B 20 D 70 17. _____
18. If $m\angle AFB = 5x - 10$ and $m\angle BFC = 3x + 20$, find x .
 F 10 G 15 H 21.25 J $23\overline{3}$ 18. _____



For Exercises 19 and 20, use the figures at the right.

19. If $\angle ABC \cong \angle EFG$, and $m\angle ABC = 72$, find $m\angle GFH$.
 A 18 C 90
 B 72 D 108 19. _____
20. If $m\angle ABJ = 28$, $\angle ABC \cong \angle DBJ$, find $m\angle JBC$.
 F 90 G 56 H 45 J 34 20. _____



Bonus $\angle A$ and $\angle B$ are vertical angles, $m\angle A = 9x + 10$, and $m\angle B = 7x + 24$. Find $m\angle A$. B: _____