

NAME: \_\_\_\_\_

*G.G.25: Know and apply the conditions under which a compound statement (conjunction, disjunction, conditional, biconditional) is true*

1. 069902a, P.I. G.G.25

The statement "If  $x$  is divisible by 8, then it is divisible by 6" is false if  $x$  equals

[A] 6      [B] 32      [C] 14      [D] 48

2. 060517a, P.I. G.G.25

The statement "If  $x$  is prime, then it is odd" is false when  $x$  equals

[A] 3      [B] 2      [C] 1      [D] 4

3. 060614a, P.I. G.G.25

Given the statement: "If  $x$  is a rational number, then  $\sqrt{x}$  is irrational." Which value of  $x$  makes the statement *false*?

[A] 2      [B] 4      [C]  $\frac{3}{2}$       [D] 3

4. 089912a, P.I. G.G.25

What is true about the statement "If two angles are right angles, the angles have equal measure" and its converse "If two angles have equal measure then the two angles are right angles"?

[A] Both the statement and its converse are true.

[B] Both the statement and its converse are false.

[C] The statement is false but its converse is true.

[D] The statement is true but its converse is false.

5. 080205a, P.I. G.G.25

Given the statement: "If two lines are cut by a transversal so that the corresponding angles are congruent, then the lines are parallel." What is true about the statement and its converse?

[A] The statement is true, but its converse is false.

[B] The statement and its converse are both true.

[C] The statement is false, but its converse is true.

[D] The statement and its converse are both false.

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6. 010112a, P.I. G.G.25

Given the statement: "If two sides of a triangle are congruent, then the angles opposite these sides are congruent." Given the converse of the statement: "If two angles of a triangle are congruent, then the sides opposite these angles are congruent." What is true about this statement and its converse?

- [A] The statement is false but its converse is true.
- [B] Both the statement and its converse are true.
- [C] Neither the statement nor its converse is true.
- [D] The statement is true but its converse is false.

7. 060730a, P.I. G.G.25

Given the statement: "A right angle measures  $90^\circ$ ." How is this statement written as a biconditional?

- [A] If an angle does not measure  $90^\circ$ , then it is not a right angle.
- [B] An angle measures  $90^\circ$  and it is a right angle.
- [C] An angle is a right angle if, and only if, it measures  $90^\circ$ .
- [D] If an angle is a right angle, then it measures  $90^\circ$ .

8. 010627a, P.I. G.G.25

Which statement is expressed as a biconditional?

- [A] If two angles are both right angles, then they are congruent.
- [B] If two angles are congruent, then they are both right angles.
- [C] Two angles are congruent if and only if they have the same measure.
- [D] Two angles are congruent if they have the same measure.

9. 010923a, P.I. G.G.25

Which statement is an example of a biconditional statement?

- [A] Craig buys a car if and only if he has money.
- [B] If Craig has money, he buys a car.
- [C] Craig has money or he buys a car.
- [D] Craig has money and he buys a car.

*G.G.25: Know and apply the conditions under which a compound statement (conjunction, disjunction, conditional, biconditional) is true*

[1] B

[2] B

[3] B

[4] D

[5] B

[6] B

[7] C

[8] C

[9] A