

**G.CO.C.9: Inverse, Converse and Contrapositive 1b**

- 1 What is the inverse of the statement "If two triangles are not similar, their corresponding angles are not congruent"?
- 2 What is the inverse of the statement "If it is sunny, I will play baseball"?
- 3 What is the inverse of the statement "If Mike did his homework, then he will pass this test"?
- 4 What is the inverse of the statement "If Julie works hard, then she succeeds"?
- 5 What is the inverse of the statement "If I do not buy a ticket, then I do not go to the concert"?
- 6 Which statement is the inverse of "If the waves are small, I do not go surfing"?
- 7 Which statement is the inverse of "If  $x + 3 = 7$ , then  $x = 4$ "?
- 8 What is the converse of the statement "If it is sunny, I will go swimming"?
- 9 Which statement is the converse of "If it is a 300 ZX, then it is a car"?
- 10 What is the converse of the statement "If it is Sunday, then I do not go to school"?
- 11 What is the converse of the statement "If Alicia goes to Albany, then Ben goes to Buffalo"?
- 12 What is the converse of the statement "If the Sun rises in the east, then it sets in the west"?
- 13 What is the converse of the statement "If Bob does his homework, then George gets candy"?
- 14 Which statement is the converse of "If the sum of two angles is  $180^\circ$ , then the angles are supplementary"?
- 15 What is the converse of the statement "If  $x$  is an even integer, then  $(x + 1)$  is an odd integer"?
- 16 What is the converse of the statement "If  $a^2 + b^2 = c^2$ , then  $\triangle ABC$  is a right triangle"?
- 17 What is the converse of "If an angle measures 90 degrees, then it is a right angle"?
- 18 Lines  $m$  and  $n$  are in plane  $\mathcal{A}$ . What is the converse of the statement "If lines  $m$  and  $n$  are parallel, then lines  $m$  and  $n$  do not intersect"?
- 19 The converse of the statement "If a triangle has one right angle, the triangle has two acute angles" is
- 20 What is the contrapositive of the statement, "If I am tall, then I will bump my head"?
- 21 What is the contrapositive of the statement "If I study, then I pass the test"?
- 22 Given the statement, "If a number has exactly two factors, it is a prime number," what is the contrapositive of this statement?
- 23 Given: "If a polygon is a triangle, then the sum of its interior angles is  $180^\circ$ ." What is the contrapositive of this statement?

**G.CO.C.9: Inverse, Converse and Contrapositive 1b**  
**Answer Section**

1 ANS:

If two triangles are similar, their corresponding angles are congruent.

REF: 011028ge

2 ANS:

If it is not sunny, I will not play baseball.

REF: 060006a

3 ANS:

If Mike did not do his homework, then he will not pass this test.

REF: 010303a

4 ANS:

If Julie does not work hard, then she does not succeed.

REF: 060317a

5 ANS:

If I buy a ticket, then I go to the concert.

REF: 080416a

6 ANS:

If the waves are not small, I go surfing.

REF: 010616a

7 ANS:

If  $x + 3 \neq 7$ , then  $x \neq 4$ .

REF: 061526ge

8 ANS:

If I go swimming, it is sunny.

REF: 080014a

9 ANS:

If it is a car, then it is a 300 ZX.

REF: 080116a

10 ANS:

If I do not go to school, then it is Sunday.

REF: 060520a

11 ANS:

If Ben goes to Buffalo, then Alicia goes to Albany.

REF: 080521a

- 12 ANS:  
If the Sun sets in the west, then it rises in the east.  
  
REF: 060717a
- 13 ANS:  
If George gets candy, then Bob does his homework.  
  
REF: 061009ge
- 14 ANS:  
If two angles are supplementary, then their sum is  $180^\circ$ .  
  
REF: 010415a
- 15 ANS:  
If  $(x + 1)$  is an odd integer, then  $x$  is an even integer.  
  
REF: 060816a
- 16 ANS:  
If  $\triangle ABC$  is a right triangle, then  $a^2 + b^2 = c^2$ .  
  
REF: 080813a
- 17 ANS:  
If an angle is a right angle, then it measures 90 degrees.  
  
REF: 061314ge
- 18 ANS:  
If lines  $m$  and  $n$  do not intersect, then lines  $m$  and  $n$  are parallel.  
  
REF: 081318ge
- 19 ANS:  
If a triangle has two acute angles, the triangle has one right angle.  
  
REF: 011605ge
- 20 ANS:  
If I do not bump my head, then I am not tall.  
  
REF: 060913ge
- 21 ANS:  
If I do not pass the test, then I do not study.  
  
REF: 080427a
- 22 ANS:  
If a number is not a prime number, then it does not have exactly two factors.  
  
REF: 011517ge
- 23 ANS:  
"If the sum of the interior angles of a polygon is not  $180^\circ$ , then it is not a triangle."  
  
REF: 081513ge