

**G.G.26: Contrapositive 2: Identify and write the inverse, converse, and contrapositive of a given conditional statement and note the logical equivalences**

- 1 What is the contrapositive of the statement, "If I am tall, then I will bump my head"?
- 2 What is the contrapositive of the statement "If I study, then I pass the test"?
- 3 Given the statement, "If a number has exactly two factors, it is a prime number," what is the contrapositive of this statement?
- 4 Which statement is logically equivalent to "If I eat, then I live"?
- 5 Which statement is logically equivalent to "If I did not eat, then I am hungry"?
- 6 Which statement is logically equivalent to "If the team has a good pitcher, then the team has a good season"?
- 7 Given the true statement: "If a person is eligible to vote, then that person is a citizen." Which statement must also be true?
- 8 Which statement is logically equivalent to "If it is Saturday, then I am not in school"?
- 9 Which statement is logically equivalent to "If a triangle is an isosceles triangle, then it has two congruent sides"?
- 10 Which statement is logically equivalent to "If I am in a mathematics class, then I am having fun"?
- 11 Which statement is logically equivalent to the statement "If you are an elephant, then you do not forget"?
- 12 Which statement is logically equivalent to the statement "If Corey worked last summer, he buys a car"?
- 13 Which statement is logically equivalent to "If I sleep, then I will not eat"?
- 14 Which statement is logically equivalent to "If it is warm, then I go swimming"?
- 15 "If Tom and Mary are classmates, then they go to the same school." Which statement below is logically equivalent?

**G.G.26: Contrapositive 2: Identify and write the inverse, converse, and contrapositive of a given conditional statement and note the logical equivalences****Answer Section**

1 ANS:

If I do not bump my head, then I am not tall.

REF: 060913ge

2 ANS:

If I do not pass the test, then I do not study.

REF: 080427a

3 ANS:

If a number is not a prime number, then it does not have exactly two factors.

REF: 011517ge

4 ANS:

If I do not live, then I do not eat.

REF: 060112a

5 ANS:

If I am not hungry, then I did eat.

REF: 080104a

6 ANS:

If the team does not have a good season, then the team does not have a good pitcher.

REF: 010220a

7 ANS:

Kayla is not a citizen; therefore, she is not eligible to vote.

REF: 010308a

8 ANS:

If I am in school, then it is not Saturday.

REF: 060308a

9 ANS:

If a triangle does not have two congruent sides, then it is not an isosceles triangle.

REF: 060405a

10 ANS:

If I am not having fun, then I am not in a mathematics class.

REF: 010930a

11 ANS:

If you forget, then you are not an elephant.

REF: 010513a

12 ANS:  
If Corey does not buy a car, he did not work last summer.

REF: 080629a

13 ANS:  
If I eat, then I will not sleep.

REF: 080829a

14 ANS:  
If I do not go swimming, then it is not warm.

REF: 081026ge

15 ANS:  
If Mary and Tom do not go to the same school, then they are not classmates.

REF: spring9812a