

G.G.26: Converse 1: Identify and write the inverse, converse, and contrapositive of a given conditional statement and note the logical equivalences

- 1 What is the converse of the statement "If it is sunny, I will go swimming"?
 - 1) If it is not sunny, I will not go swimming.
 - 2) If I do not go swimming, then it is not sunny.
 - 3) If I go swimming, it is sunny.
 - 4) I will go swimming if and only if it is sunny.
- 2 Which statement is the converse of "If it is a 300 ZX, then it is a car"?
 - 1) If it is not a 300 ZX, then it is not a car.
 - 2) If it is not a car, then it is not a 300 ZX.
 - 3) If it is a car, then it is a 300 ZX.
 - 4) If it is a car, then it is not a 300 ZX.
- 3 What is the converse of the statement "If it is Sunday, then I do not go to school"?
 - 1) If I do not go to school, then it is Sunday.
 - 2) If it is not Sunday, then I do not go to school.
 - 3) If I go to school, then it is not Sunday.
 - 4) If it is not Sunday, then I go to school.
- 4 What is the converse of the statement "If Alicia goes to Albany, then Ben goes to Buffalo"?
 - 1) If Alicia does not go to Albany, then Ben does not go to Buffalo.
 - 2) Alicia goes to Albany if and only if Ben goes to Buffalo.
 - 3) If Ben goes to Buffalo, then Alicia goes to Albany.
 - 4) If Ben does not go to Buffalo, then Alicia does not go to Albany.
- 5 What is the converse of the statement "If the Sun rises in the east, then it sets in the west"?
 - 1) If the Sun does not set in the west, then it does not rise in the east.
 - 2) If the Sun does not rise in the east, then it does not set in the west.
 - 3) If the Sun sets in the west, then it rises in the east.
 - 4) If the Sun rises in the west, then it sets in the east.
- 6 What is the converse of the statement "If Bob does his homework, then George gets candy"?
 - 1) If George gets candy, then Bob does his homework.
 - 2) Bob does his homework if and only if George gets candy.
 - 3) If George does not get candy, then Bob does not do his homework.
 - 4) If Bob does not do his homework, then George does not get candy.
- 7 Which statement is the converse of "If the sum of two angles is 180° , then the angles are supplementary"?
 - 1) If two angles are supplementary, then their sum is 180° .
 - 2) If the sum of two angles is not 180° , then the angles are not supplementary.
 - 3) If two angles are not supplementary, then their sum is not 180° .
 - 4) If the sum of two angles is not 180° , then the angles are supplementary.

- 8 What is the converse of the statement "If x is an even integer, then $(x + 1)$ is an odd integer"?
- 1) x is not an even integer if and only if $(x + 1)$ is not an odd integer.
 - 2) x is an even integer if and only if $(x + 1)$ is an odd integer.
 - 3) If $(x + 1)$ is not an odd integer, then x is not an even integer.
 - 4) If $(x + 1)$ is an odd integer, then x is an even integer.
- 9 What is the converse of the statement "If $a^2 + b^2 = c^2$, then $\triangle ABC$ is a right triangle"?
- 1) If $\triangle ABC$ is a right triangle, then $a^2 + b^2 = c^2$.
 - 2) $a^2 + b^2 = c^2$ if, and only if, $\triangle ABC$ is a right triangle.
 - 3) If $\triangle ABC$ is not a right triangle, then $a^2 + b^2 = c^2$.
 - 4) If $a^2 + b^2 = c^2$, then $\triangle ABC$ is not a right triangle.
- 10 What is the converse of "If an angle measures 90 degrees, then it is a right angle"?
- 1) If an angle is a right angle, then it measures 90 degrees.
 - 2) An angle is a right angle if it measures 90 degrees.
 - 3) If an angle is not a right angle, then it does not measure 90 degrees.
 - 4) If an angle does not measure 90 degrees, then it is not a right angle.
- 11 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"?
- 1) If lines m and n are not parallel, then lines m and n intersect.
 - 2) If lines m and n are not parallel, then lines m and n do not intersect
 - 3) If lines m and n intersect, then lines m and n are not parallel.
 - 4) If lines m and n do not intersect, then lines m and n are parallel.

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1	ANS: 3	REF: 080014a
2	ANS: 3	REF: 080116a
3	ANS: 1	REF: 060520a
4	ANS: 3	REF: 080521a
5	ANS: 3	REF: 060717a
6	ANS: 1	REF: 061009ge
7	ANS: 1	REF: 010415a
8	ANS: 4	REF: 060816a
9	ANS: 1	REF: 080813a
10	ANS: 1	REF: 061314ge
11	ANS: 4	REF: 081318ge