

## Conditional Statements Part 2

It's time to practice your conditional statements. Remember, CONVERSE means SWITCH; INVERSE means YES→NO & NO→ YES; CONTRAPOSITIVE means BOTH CONVERSE and INVERSE; BICONDITIONAL means use IF & ONLY IF.

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| <p>1. If two angles have equal measures, then they are congruent.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p> | <p>2. If you don't take the tests, then you can still pass the class.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p> |
| <p>3. If my name is Spots, then I'm a puppy.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p>                      | <p>4. If Pinocchio tells a lie, then his nose will grow.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p>              |
| <p>5. If it's after noon, then it is not morning.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p>                 | <p>6. If it's a rectangle, then its area is base times height.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p>        |
| <p>7. If you go to Mars, then you will have to visit the moon.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p>    | <p>8. If I am crazy, then I am Ms. Grosvenor.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p>                         |

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| <p>9. If I am a hippo, then my favorite color is red.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p> | <p>10. If two angles are complementary, then their measures add to equal <math>90^\circ</math>.</p> <p>TRUE or FALSE?</p> <p>CONVERSE:</p> <p>INVERSE:</p> <p>CONTRAPOSITIVE:</p> <p>BICONDITIONAL:</p> |
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Now it's time to look at our conditional statements and see what's true and what isn't. We'll use **two laws**.

**LAW OF DETACHMENT:** The beginning causes the end, but the END DOES NOT CAUSE THE BEGINNING.

For **example:** If my alarm goes off, then I wake up.

The alarm going off (the beginning) CAUSES me to wake up (the end).

Waking up (the end) DOES NOT CAUSE my alarm to go off (the beginning).

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| <p>11. If I do well on the tests and quizzes, then I will pass the class.</p> <p>_____ CAUSES _____</p> <p>_____ DOES NOT CAUSE _____</p> | <p>12. If I eat lunch, then I am not hungry in the afternoon.</p> <p>_____ CAUSES _____</p> <p>_____ DOES NOT CAUSE _____</p>      |
| <p>13. If I pay attention, then I learn stuff.</p> <p>_____ CAUSES _____</p> <p>_____ DOES NOT CAUSE _____</p>                            | <p>14. If two angles are vertical, then they are congruent.</p> <p>_____ CAUSES _____</p> <p>_____ DOES NOT CAUSE _____</p>        |
| <p>15. If I drink water, then I'm not thirsty anymore.</p> <p>_____ CAUSES _____</p> <p>_____ DOES NOT CAUSE _____</p>                    | <p>16. If I use a calculator in Ms. G's class, then I am cheating.</p> <p>_____ CAUSES _____</p> <p>_____ DOES NOT CAUSE _____</p> |

**LAW OF SYLLOGISM:** This is basically the transitive property. You can skip the connected middle (if it's the same)

For **example:** If I go to Murrieta, then I go to my parents'. If I go to my parents', then I see my family.

If I go to Murrieta, ~~then I go to my parents'~~. If I go to my parents', then I see my family.

If I go to Murrieta, then I see my family.

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| <p>17. If I'm hungry, then I eat. If I eat, then I have dessert.</p> <p>Cross out the connected middle. What is left?</p> <p>_____</p>   | <p>18. If I juggle swords, then I get injured. If I get injured, then I go to the hospital.</p> <p>Cross out the connected middle. What is left?</p> <p>_____</p> |
| <p>19. If Ms. G's pen dies, then she will throw the pen. If she throws the pen, then she has to get a new one.</p> <p>Cross out the connected middle. What is left?</p> <p>_____</p> | <p>20. If it's Monday, then I go to work. If I go to work, then I am at SVHS.</p> <p>Cross out the connected middle. What is left?</p> <p>_____</p>               |