Geometry Quiz – Conditional Statements and Laws

<u>Underline</u> the hypothesis and ⬭circle⬭ the conclusion for each conditional. Write the converse, inverse, and contrapositive. Next to each, write the correct symbolic notation.

1. If you like geometry, then you are cool.
   Converse: _____ Symbols: _____
   Inverse: _____ Symbols: _____
   Contrapositive: _____ Symbols: _____
2. If the Colonels play basketball, then they win.
   Converse: _____ Symbols: _____
   Inverse: _____ Symbols: _____
   Contrapositive: _____ Symbols: _____

If the given conditional is true, which of the following statements <u>must</u> be true? **WRITE TRUE OR FALSE FOR EACH QUESTION!**

   If you are at least 18, then you can vote.

3. You are 16 and you don't vote.
4. You don't vote and you are 16.
5. You are 21 and you vote.
6. You vote and you are 19.

Assume the following conditionals are true. A) What conclusion can you make, if any? B) Which law of logic are you using (Law of Detachment or Law of Syllogism)? If no conclusion can be made, write "None"

7. If I go to the movie, then I'll eat popcorn.
   If I eat popcorn, then I'll enjoy the movie.
   A. Conclusion? _____
   B. Law of Logic? _____
8. If this wind keeps up, then we will lose some trees.
   We lose some trees.
   A. Conclusion? _____
   B. Law of Logic? _____
9. If I miss my bus, then I'll be late for school.
   I miss my bus.
   A. Conclusion? _____
   B. Law of Logic? _____
10. If a figure is a square, then it is a rectangle.
    If a figure is a square, then it is a rhombus.
    A. Conclusion? _____
    B. Law of Logic? _____

11. If p=It is raining, and q=Penguins are awesome.
    A. Write "If it is raining, then penguins are awesome." in symbol format. _____
    B. Write "If penguins are not awesome, then it is not raining." in symbol format. _____
12. If monkeys can fly, then we are on our way to the Land of Oz.
    A. p=_____
    B. q=_____