Math 1 Honors ~~Chapter Test B~~ *Practice Test* Name ___Key___ Hour ___

＊fixed ＊ Law of Detachment

Find a pattern for each sequence. Describe the pattern and use it to show the next two terms.

1. 5, 7, 14, 16, 32, ...
+2 x2 +2 x2

2. 24, 12, 6, ...
÷2

1. ___34, 68___

2. ___3, 3/2___

Find a counterexample to show that each conjecture is false.

3. The product of any integer and 2 is greater than 2.   1 or less

3. ___2 • -3 = -6___

4. If you live in Moscow, then you live in Idaho.

4. ___Russia___

VT
TN TX
AR KS
IA KY
IN ME
MI ND
OH PA

Rewrite each sentence as a conditional statement.

5. All motorcyclists wear a helmet.

5. ___If you are a motorcyclists then you wear a helmet___

6. Angles that form a linear pair are supplementary.

6. ___If two angles form a linear pair then the angles are suplementary___

Identify the hypothesis and conclusion of the statement.

7. If you want to be healthy, then you should eat vegetables.

7. H: ___you want to be Healthy___

C: ___you should eat vegetables___

8. If you go to Ridgeline, then you live in Millville.

8. H: ___you go to Ridgeline___

C: ___you live in Millville___

Use the following statement for questions 9-12. Determine the truth value of each statement. *If the statement is false, write a counterexample.*

If an angle measures 80°, then it is acute.

9. Truth Value of the conditional

9. ___True___

10. Write the converse and determine its truth value.

10. ___If an angle is acute then it measures 80°. False ∡60°___

11. Write the inverse and determine its truth value.

11. ___If an angle doesn't measure 80°, then it is not acute. False ＊60°___

12. Write the contrapositive and determine its truth value.

12. ___If an angle is not acute then the angle doesn't measure 80° True___

Determine whether each statement is a good definition. If not, explain.

13. An octagon is a polygon that has exactly 8 sides.

13. _Good_

14. Parallel lines have no points of intersection.

14. _No, could be Skewed_

15. Write the following definition as a biconditional.

   Complementary angles have a sum of 90 degrees.

15. _Angles are complementary if they have a sum of 90 degrees._

16. Write the following biconditional as two statements, a conditional and its converse.

   $x^2 = 16$ if and only if $x = 4$ or $x = -4$.

16. _If $x^2 = 16$ then $x = 4$ or $x = -4$_
   If $x = 4$ or $x = -4$ then $x^2 = 16$

Use the Law of Detachment to make a conclusion.

17. If a whole number ends with a 0, then it is divisible by 10.
   Thirty is a whole # which ends in 0.
   ~~If a whole number is divisible by 10, then it is divisible by 5.~~

17. _Thirty is divisible by 10._

18. ~~If a figure is a three-sided polygon, then it is a triangle.~~ _If you practice tennis everyday then you will become a better player._
   ~~If a figure is a triangle, then it has three vertices.~~ _Colin practices tennis everyday._

18. _Colin will become a better player._

Use the law of Syllogism to make a conclusion.

19. If two angles are vertical, then they are congruent.

   If two angles are congruent, then their measures are equal.

19. _If two angles are vertical, then their measures are equal_

20. If you play lacrosse, then you are on the team.

   If you are on the team, then you are a varsity athlete.

20. _If you play lacrosse, then you are a varsity athlete._