Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Unit 5 Review

Monica

Geometry Period:\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions:** The questions below are designed to help you review for your test tomorrow. They are separated by outcome. Answers can be found online!

**#15: Concludes the conditions under which a compound statement is true and can write the inverse, converse, and contrapositive of a given statement**

 1) What is the negation of the statement “Squares are parallelograms”?

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| 1) | Parallelograms are squares. |
| 2) | Parallelograms are not squares. |
| 3) | It is not the case that squares are parallelograms. |
| 4) | It is not the case that parallelograms are squares. |

 2) Which statement is the negation of “Two is a prime number” and what is the truth value of the negation?

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| 1) | Two is not a prime number; false |
| 2) | Two is not a prime number; true |
| 3) | A prime number is two; false |
| 4) | A prime number is two; true |

 3) The statement  is true when *a* is equal to

 1) 10 2) 2 3) 3 4) 5

 4) The statement "*x* is divisible by 5 or *x* is divisible by 4" is false when *x* equals

 1) 10 2) 16 3) 20 4) 27

 5) The statement “If *x* is divisible by 8, then it is divisible by 6” is false if *x* equals

 1) 6 2) 14 3) 32 4) 48

 6) Given the statement: “If two lines are cut by a transversal so that the corresponding angles are congruent, then the lines are parallel.” What is true about the statement and its converse?

1. The statement and its converse are both true.
2. The statement and its converse are both false.
3. The statement is true, but its converse is false.
4. The statement is false, but its converse is true.

 7) Which compound statement is true?

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| 1) | A square has four sides and a pentagon has six sides. |
| 2) | A square has four sides if and only if a pentagon has six sides. |
| 3) | If a square has four sides, then a pentagon has six sides. |
| 4) | A square has four sides or a pentagon has six sides. |

 8) If , which statement is false?

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| 1) | *x* is prime and *x* is odd. |
| 2) | *x* is odd or *x* is even. |
| 3) | *x* is not prime and *x* is odd. |
| 4) | *x* is odd and 2*x* is even. |

9) What is the inverse of the statement “If Julie works hard, then she succeeds”?

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| 1) | If Julie succeeds, then she works hard. |
| 2) | If Julie does not succeed, then she does not work hard. |
| 3) | If Julie works hard, then she does not succeed. |
| 4) | If Julie does not work hard, then she does not succeed. |

 10) Which statement is the converse of “If the sum of two angles is 180°, then the angles are supplementary”?

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| 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. |

 11) Given the true statement: “If a person is eligible to vote, then that person is a citizen.” Which statement must also be true?

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| 1) | Kayla is not a citizen; therefore, she is not eligible to vote. |
| 2) | Juan is a citizen; therefore, he is eligible to vote. |
| 3) | Marie is not eligible to vote; therefore, she is not a citizen. |
| 4) | Morgan has never voted; therefore, he is not a citizen. |

 12) Which statement is logically equivalent to “If it is Saturday, then I am not in school”?

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| 1) | If I am not in school, then it is Saturday. |
| 2) | If it is not Saturday, then I am in school. |
| 3) | If I am in school, then it is not Saturday. |
| 4) | If it is Saturday, then I am in school. |

13) Write the negation of the following statement and determine its truth value: Parallel lines do not intersect.

**#16: Identifies polygons precisely and can determine angle sums and missing angle measures**

14) The measure of one interior angle in a regular polygon is 160°. How many sides does this polygon have?

15) What is the sum of the interior angles in a regular decagon?

16) What is the measure of one exterior angle in a regular pentagon?

17) Find the value of x in the diagram below.



18) What is the value of x in the hexagon below? (Note: Figure not drawn to scale.)

2x°

2x°

x+20°

102°

3x°

3x+15°

19) The diagram below shows only part of a regular polygon. It is unknown how many sides the polygon has. If x + y = 312, how many sides must the polygon have?



20) The exterior angles in a polygon measure  What is the value of x?