Unit 2 Review

Rewrite the given statement into if-then form. Then tell what the converse, inverse, contrapositive is.   *1pt each*

1. All octagons have 8 sides.

      a.   If-Then Conditional statement:_____

      b.   Hypothesis: _____

      c.   Conclusion: _____

      d.   Converse: _____

      e.   Inverse: _____

      f.   Contrapositive: _____

Determine the truth-value for the following statements. If a statement if false, give a counter example.   *1pt each*

2. If you are a freshman, then you have Mr. Sullivan for math.

3. If a number is divisible by 10, then it ends with a "0".

4. If your first name is Barb, then your last name is Dwyer.

5. If the figure is a triangle, then its angles are all acute.

Find a pattern for each sequence. Use the pattern to find the next two terms.   *2pts each*

6. 30, 23, 16, 9…   7. 1, 0, 10, 0, 100, …   8. 64, 32, 16…

Use the sequence and inductive reasoning to make a conjecture: *2pts each*

9. What pattern is in the 18th figure?   10. What is the shape of the 27th figure?

Support each conclusion with a valid reason.   *1pt each*

11. Given: $5x = 25$ **12.** Given: $3(2y + x) = -12$ **13.** Given: $-x = 21$

Conclusion:_____   Conclusion:_____   Conclusion:_____
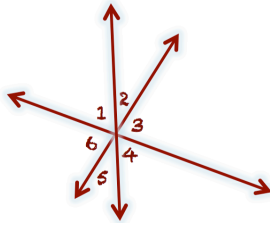
Reason:_____   Reason:_____   Reason:_____

Given: $24 - 2(x - 2) - 30 = 0$	Prove: $x = -1$

Statement	Reason	1pt each
1. $24 - 2(x - 2) - 30 = 0$	1.	
2.	2.	
3.	3.	
4.	4.	
5.	5.	
6.	6.	

Unit 2 Application

Given: $\angle 2 \cong \angle 6$
Prove: $\angle 3 \cong \angle 5$

2pts each

Statement	Reason	
1. $\angle 2 \cong \angle 6$	1. Given	
2. $\angle 2 \cong \angle 5$	2. Vertical Angles Are $\cong$	
3.	3.	
4. $\angle 5 \cong \angle 6$	4.	(Steps 1,2)
5.	5. Substitution Property	(Steps 1, 3, 4)
6.	6. Symmetric Property	(Step 5)

Algebra Review

½pt each

Solve each equation for x!		Multiply!	Factor!
1. $12x - 6 = -3$	2. $5x - 4 = 3x - 4$	3. $5x(3x - 2)$	4. $10x^2 - 20x$

5. Graph the equation:

$y = 5 - 2x$

6. Graph the equation:

$y = 5$