Name: _		
Period:	Date:	

Geometry Honors Chapter 1 Test A

**Be very clear with all your responses and use academic language and support your answers with definitions, theorems, postulates, and geometry concepts ** WRITE ALL ANSWERS ON ANSWER SHEET PROVIDED!

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Find a counterexample to show that the conjecture is false.

Conjecture: The product of two positive numbers is greater than the sum of the two numbers.

- A. 3 and 5
- $B. \ 2 \ and \ 2$
- C. A counterexample exists, but it is not shown above.
- D. There is no counterexample. The conjecture is true.

2. If $m \angle EOF = 26$ and $m \angle FOG = 38$, then what is the measure of $\angle EOG$? The diagram is not to scale.



A.	64
B.	12
C.	52

D. 76

Short Answer

- 3. a) What is the intersection of plane *STXW* and plane *SVUT*?
 - b) Name a pair of parallel segments
 - c) Name a pair of perpendicular segments
 - d) Name a pair of skew lines.



 MO bisects ∠LMN, m∠LMO = 7x - 24, and m∠NMO = 2x + 31. Solve for x and find m∠LMN. The diagram is not to scale.



5. What can you conclude from the information in the diagram (In other words, name all possible congruencies and relationships)?



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 If m∠DEF = 126, then what are m∠FEG and m∠HEG? THEN, explain the relationship of the two angles ∠FEG and ∠HEG with ∠DEF.



- 7. Find PQ if P(5, 8) and Q(7, 1). Round your answer to the nearest tenth or leave it in simplest Radical Form (it looks nicer!!).
- 8. If T is the midpoint of \overline{SU} , find the values of x and ST. The diagram is not to scale.



9. Write an expression that gives the area of the *shaded* region in the figure below. You do not have to evaluate the expression. The diagram is not to scale. (In other words, write a õConcept Equationö for your thoughts on how to find the area of the shaded region)



10. Find the circumference and area of the circle in terms of π .



Essay

- 11. Find the measures of $\angle PMN$ and $\angle NMR$ if MN bisects $\angle PMR$. The measure of $\angle PMR$ is 140°. Draw a sketch that shows the given information. Explain your answer.
- 12. Plot the points A(5, 10) and B(63, 66). Find midpoint M of \overline{AB} . Then show that AM = MB and AM + MB = AB.