## **Honors Geometry**

#### 9.

Tell whether each statement is true Always (A), Sometimes (S), or Never (N).

- b. The supplement of one of the  $\angle s$  of a  $\triangle$  is equal in measure to the sum of the other two  $\angle s$  of the  $\triangle$ .
- c. A  $\triangle$  contains two obtuse  $\angle$ s.
- d. If one of the  $\[these scales \Delta$  is 60°, the  $\[these scales \Delta$  is equilateral.
- e. If the sides of one  $\Delta$  are doubled to form another  $\Delta$ , each  $_{\perp}$  of the second  $\Delta$  is twice as large as the corresponding  $_{\perp}$  of the first  $\Delta$

# 11. Find $m_{\perp}MRP$ , $m_{\perp}ORP$ , and $m_{\perp}MOR$ .



### 15.

The measures of the two  $\angle$ s of a  $\triangle$  are in the ratio of 2:3. If the third  $\angle$  is 4° larger than the larger of the other two  $\angle$ s, find the measure of an exterior angle at the third vertex.

16.

**CD** bisects ∠ACB

 $\overrightarrow{BD}$  is one of the trisectors of  $\angle ABC$ .





# 17.

- Given: EFGH is a rectangle FH = 20 J, K, M, and O are midpoints.
  - a. Find the perimeter of JKMO.
  - b. What is the most descriptive name for JKMO?





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19.

Prove that the midpoint of the hypotenuse of a right  $\Delta$  is equidistant from all three vertices.

Given:

Prove:

Statements	Reasons

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20.

Prove that if the midpoints of a quadrilateral are joined in order, the figure formed is a  $\square$ .

Given:

Prove:



## 21.

Given:  $\overline{AB} \cong \overline{AC}$  $\overline{AE} \cong \overline{DE} \cong \overline{DB} \cong \overline{BC}$ 



