Geometry Honors
Unit 5: Parallel and Perpendicular Lines
5.1a Parallel and Perpendicular Lines

Mathematician: $\qquad$
Period: $\qquad$
LEVEL: EMERGING
Directions: Give a real life example of the line type.

| 1) Skew lines | 2) Parallel lines | 3) Coplanar lines | 4) Perpendicular lines |
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## LEVEL: PROFICIENT

Directions: Think of each segment in the diagram as part of a line. Complete the statement with parallel, skew, or perpendicular.
5) $\overleftrightarrow{W Z}$ and $\overleftrightarrow{R S}$ are $\qquad$ .
6) $\overleftrightarrow{W Z}$ and $\overleftrightarrow{Y Z}$ are $\qquad$ .
7) $\overleftrightarrow{R S}$ and $\overleftrightarrow{T Z}$ are $\qquad$ .
8) Plane $W Q R$ and plane $S Y T$ are $\qquad$ .

9) Plane $R Q W$ and plane $T Q W$ are $\qquad$ . Directions: Classify the angle pair as corresponding, alternate interior, alternate exterior, consecutive interior angles, or none.

10) 1 and 5
11) 4 and 6
12) 16 and 3
13) 11 and 16
14) $\quad 12$ and 14
15) 7 and 13

Directions: Complete the following statement with always, sometimes, or never.
16) If two planes intersect, then they are $\qquad$ perpendicular.
17) If two lines are skew, then they are $\qquad$ coplanar.
18) If three lines are coplanar and never intersect, then they are $\qquad$ parallel.

19）If two lines are parallel，then they are $\qquad$ coplanar．

Directions：Use the marking in the diagram to answer the following questions．
20）Name a pair of parallel lines． $\qquad$
21）Name a pair of perpendicular lines． $\qquad$
22）Is $\overleftrightarrow{Q S} \square \overleftrightarrow{P M}$ ？Explain．

23）Is $\overleftrightarrow{O L} \quad \overleftrightarrow{T R}$ ？Explain．


Directions：Sketch the line in the diagram．
24）Line through $A$ and parallel to $B C$ ．
25）Line through $A$ and perpendicular to $B C$ ．
26）Line through B and perpendicular to $A C$ ．
27）Line through $C$ and parallel to $A B$ ．


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28．Directions：If $m \angle 3=71^{\circ}$ ，can you find all the missing angles？Write a reason for whether or not you can find each angle as well as the angle measure．


