Geometry Review Sheet #2 Name _____

Date Due: **December 2, 2011**

1. Which is an equation of the line that passes through the point (-1, 5) and is parallel to the *y*-axis?

(1) $y = -1$ (3) $x = -1$

(2) $y = 5$ (4) $x = 5$

2. If point *A* is not on plane *P*, how many lines can be drawn through point *A* that are parallel to plane *P*?

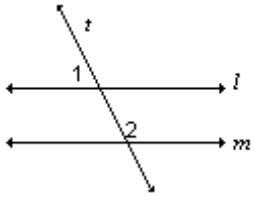
(1) 1

(2) 2

(3) 0

(4) infinite

3.



In the diagram, parallel lines *l* and *m* are cut by transversal *t*. Which statement about angles 1 and 2 *must* be true?

(1) $\angle 1 \cong \angle 2$.

(2) $\angle 1$ is a complement to $\angle 2$.

(3) $\angle 1$ is a supplement to $\angle 2$.

(4) $\angle 1$ and $\angle 2$ are right angles.

4. If *C* is the midpoint of $\overline{AB}$ and *D* is the midpoint of $\overline{AC}$, which statement is true?

(1) $AC > BC$

(2) $AD < CD$

(3) $DB = AC$

(4) $DB = 3CD$

5. Which letter has point symmetry but *not* line symmetry?

(1) **H** (3) **T**

(2) **S** (4) **X**

6. The point *R*(-2, 5) is reflected in the *x*-axis. In which quadrant does the image of point *R* lie?

(1) I (3) III

(2) II (4) IV

7. Let *p* represent "The outside temperature is 30° C," and let *q* represent "It is summer." Write in symbolic form, using *p* and *q*, "If it is not summer, then the outside temperature is not 30° C."

(1) $p \rightarrow q$

(2) $\sim p \rightarrow \sim q$

(3) $\sim q \rightarrow \sim p$

(4) $q \rightarrow p$

8. In three-dimensional space, two planes are parallel and a third plane intersects both of the parallel planes. The intersection of the planes is a

(1) plane

(2) point

(3) pair of parallel lines

(4) pair of intersecting lines

9. A translation moves *P*(4, 4) to *P'*(6, 1). Find the coordinates of the image of (-3, 2) under the same translation.

(1) (-5, 5) (3) (2, -3)

(2) (-6, 4) (4) (-1, -1)

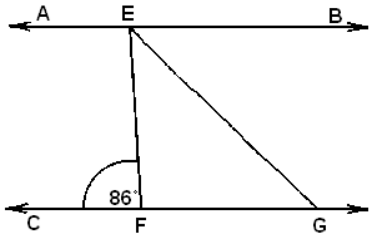
Short Answer

Please show all work on a separate piece of paper and/or graph paper.

10. Given the points $A(2, 3)$, $B(-4, 3)$, $C(5, -1)$, and $D(1, k)$. If $\overline{AB} \parallel \overline{CD}$, find the value of k.

11. The slope of $\overleftrightarrow{RU}$ is $\frac{3}{5}$. If $\overleftrightarrow{RU} \parallel \overleftrightarrow{ST}$ and the slope of $\overleftrightarrow{ST}$ is $\frac{x-6}{x}$, what is the value of x?

12. In the accompanying diagram, $\overleftrightarrow{AEB} \parallel \overleftrightarrow{CFG}$, $\overline{EG}$ bisects $\angle BEF$, and $m\angle EFC = 86$. Find $m\angle EGF$.



13. What is the equation for the perpendicular bisector of the line segment whose endpoints are (–7, 2) and (–1,–6)?

14. The coordinates of ΔJRB are $J(1,-2)$, $R(-3,6)$, and $B(4,5)$. What are the coordinates of the vertices of its image after the transformation $T_{2,-1} \circ r_{y\text{-axis}}$

15. If a line segment has endpoints $A(3x + 5, 3y)$ and $B(x - 1, -y)$, what are the coordinates of the midpoint of $\overline{AB}$?

16.

Rectangle $ABCD$	Rectangle $A'B'C'D'$
$A(2, 4)$	$A'(3, 1)$
B	$B'(-5, 1)$
$C(2, -1)$	$C'(3, -4)$
$D(-6, -1)$	D'

A design was constructed by using two rectangles $ABCD$ and $A'B'C'D'$. Rectangle $A'B'C'D'$ is the result of a translation of rectangle $ABCD$. In the table of translations, what are the coordinates of points B and D'?

17. If $\overleftrightarrow{AB}$ intersects $\overleftrightarrow{CD}$ at E, $m\angle AEC = 3x$, and $m\angle AED = 5x - 60$, find the value of x.

18. Determine the distance between point $A(-1,-3)$ and point $B(5,5)$.