Unit 1 Geometry Review Guide

For 1-5, state whether the statement is true or false. If FALSE, cross off and replace a word or words to make it TRUE.

1. The ray from point R through point P and point Q is named as $\overrightarrow{RQ}$ or $\overrightarrow{RP}$.

2. The line segment from point P to point Q can only be named as $\overline{PQ}$.

3. If two angles are supplementary, then they are always a linear pair.

4. If $\overleftrightarrow{AB}$ intersects $\overleftrightarrow{CD}$ at point P, then $\angle APC$ and $\angle APD$ are a pair of vertical angles.

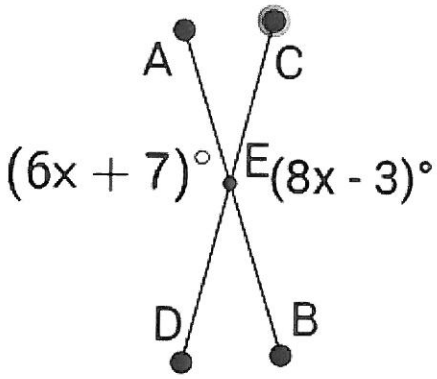
5. If two lines never intersect, then they are parallel.

6. Given 3 collinear points where B is in between A and C (hint: sketch a pic), $AB = x + 2$, BC = 6, $AC = 6x - 7$. Find the length of AC.

7. If $\overrightarrow{BD}$ is the angle bisector of $\angle ABC$, BE is the angle bisector of $\angle ABD$, and the m$\angle DBC$ = 16°, What is the measure of $\angle EBC$?

8. If four times the measure of an angle is equal to five times the measure of its complement, find the measure of each angle.

9. Solve for x and find the measure of angle AED and angle AEC (not drawn to scale).

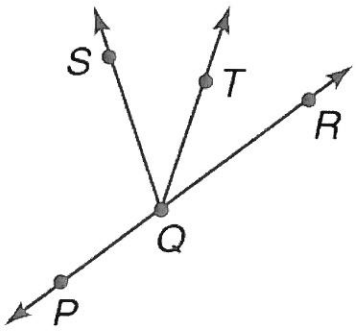


10. M is the midpoint of $\overline{YZ}$ (hint: sketch a pic). If $YM = r + 3$ and $YZ = 3r - 1$, find the length of $\overline{MZ}$.

11. Find the midpoint and length of the segment AB where A(-4, 6) and B(1, -6).

12. Given segment AB with a midpoint M and A(-3, 7) and M (-1, 1), find the coordinates of B.

13. In the figure, $\overrightarrow{QP}$ and $\overrightarrow{QR}$ are opposite rays, and $\overrightarrow{QT}$ bisects $\angle RQS$. Find the measure of $\angle PQT$ if $\angle RQT = 4x + 7$ and $\angle SQP = 20x - 30$



14. Make sure you know the following vocabulary. You will not need to define these words from scratch, but you need to know what they mean: collinear, coplanar, opposite rays, partition, polygons from quadrilateral to dodecagon, vertical angles, linear pairs, complementary, supplementary, skew lines, postulate, theorem.

15. Write the equation of line through the points (-11, 22) and (-8, 10) in slope intercept form.

16. Write the equation of a line through the point (5, -7) and perpendicular to the line through the points (13, 6) and (25, 0) in slope-intercept form.

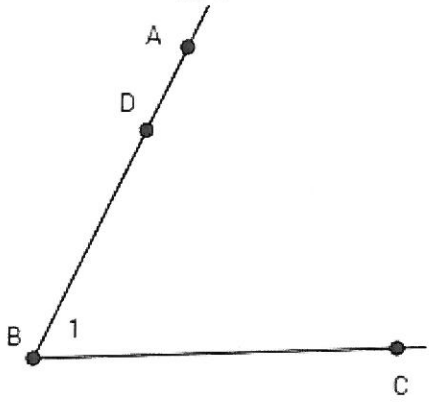
17. Find the perimeter and area of rectangle G(-2. 5), I(2, 2), R(-1, -2), L(-5, 1). Also, find the midpoint of each side. Do on graph paper.

18. Find the perimeter and area of triangle B(-3. -1) O(3, -1) Y(1, 5). Do on graph paper.

19. Find the equation of a vertical line through with an x-intercept of -3. What is the slope of that line? Sketch a picture of the line.

20. Which of the following is a correct way to name $\angle ABC$ on the right? Circle all that apply.

a) $\angle CDA$
b) $\angle CBA$
c) $\angle CBD$
d) $\angle BD$
e) $\angle B$
f) $\angle 1$



21. Find the equation of the line that goes through the point (3, -4) and is perpendicular to the line $3x + 9y = 18$.

22. Find the midpoint and length of segment AB where A(-5, -3) and B(2, 21).

23. Four times the measure of one angle is equal to eleven times the measure of its supplement. Find the measure of each angle.