

Name: _____

Key

Date: _____

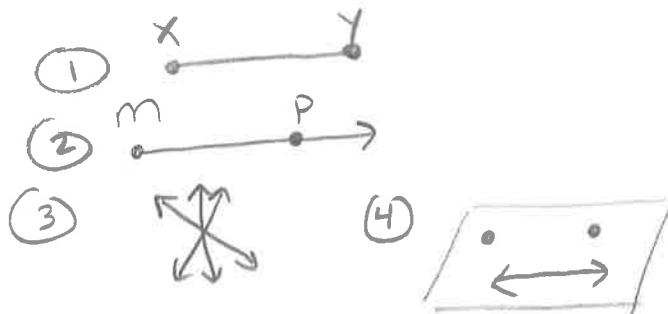
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GEOMETRY – 1.1 – 1.3 Review

1-1 Understanding Points, Lines, and Planes

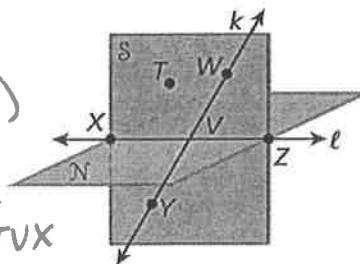
Draw and label each of the following.

1. a segment with endpoints X and Y
2. a ray with endpoint M that passes through P
3. three coplanar lines intersecting at a point
4. two points and a line that lie in a plane



Use the figure to name each of the following.

5. three coplanar points T, V, W (possible)
6. two lines \overleftrightarrow{XV} , \overleftrightarrow{WV}
7. a plane containing T, V, and X Plane S or Plane TVX
8. a line containing V and Z \overleftrightarrow{VZ}



1-2 Measuring and Constructing Segments

Find the length of each segment.

9. \overline{SV}

10. \overline{TR}

11. \overline{ST}

$$|5 - (-1.5)|$$

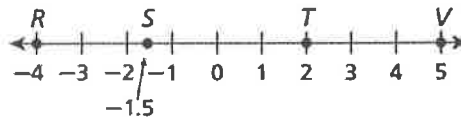
6.5

$$|2 - (-4)|$$

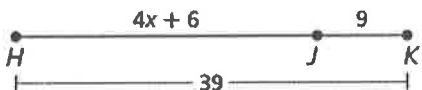
6

$$|2 - (-1.5)|$$

3.5



12. Use the figure to solve for x.



$$4x + 6 + 9 = 39$$

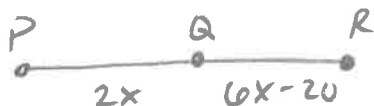
$$4x + 15 = 39$$

$$-15 \quad -15$$

$$\frac{4x}{4} = \frac{24}{4}$$

$x = 6$

13. Q is the midpoint of \overline{PR} , $PQ = 2x$ and $QR = 6x - 20$. Find the length of PR.



$$\begin{array}{r} 2x = 6x - 20 \\ -6x \quad -6x \\ \hline -4x = -20 \\ \frac{-4}{-4} \quad \frac{-20}{-4} \\ \hline x = 5 \end{array}$$

$PQ = 2(5) = 10$

$QR = 10$

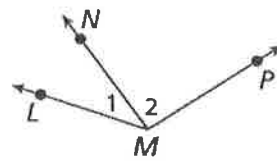
$PR = 10 + 10 = 20$

$x = 5$

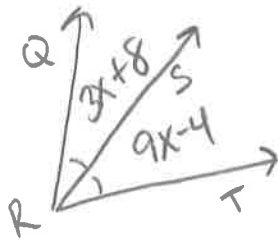
14. Use the points to name angle 1 and angle 2 in the diagram.

~~$\angle LMN$~~

~~$\angle NMP$~~



15. \overline{RS} bisects $\angle QRT$, $m\angle QRS = (3x + 8)^\circ$, and $m\angle SRT = (9x - 4)^\circ$. Find $m\angle SRT$.



$$\begin{array}{r} 3x + 8 = 9x - 4 \\ -3x \quad -3x \\ \hline 8 = 6x - 4 \\ +4 \quad +4 \\ \hline 12 = 6x \\ \frac{12}{6} = \frac{6x}{6} \quad 2 = x \end{array}$$

$$\begin{aligned} m\angle SRT &= 9(2) - 4 \\ &= 18 - 4 \\ &= 14^\circ \end{aligned}$$

Classify each angle by its measure.

16. $m\angle PVQ = 21^\circ$

17. $m\angle RVT = 96^\circ$

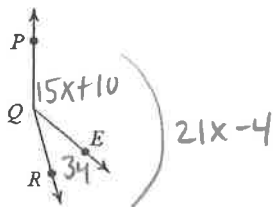
18. $m\angle PVS = 143^\circ$

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Obtuse

Obtuse

19. Find x if $m\angle PQR = 21x - 4$,
 $m\angle PQE = 15x + 10$, and $m\angle EQR = 34^\circ$



$$\begin{array}{r} 15x + 10 + 34 = 21x - 4 \\ 15x + 44 = 21x - 4 \\ -15x \quad -15x \\ \hline 44 = 6x - 4 \\ +4 \quad +4 \\ \hline 48 = 6x \\ \frac{48}{6} = \frac{6x}{6} \\ 8 = x \end{array}$$

20. Points are collinear if they: are on the same line