

Chapter 1 Test Study Guide
(Geometry Basics)

R

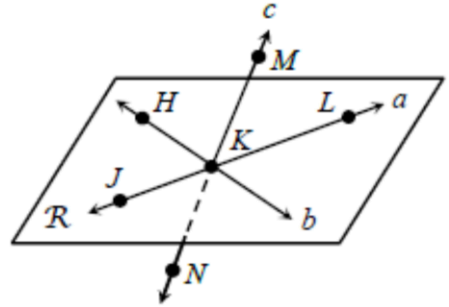
Name: _____

Date _____ Period _____

Topic #1: Points, Lines, and Planes

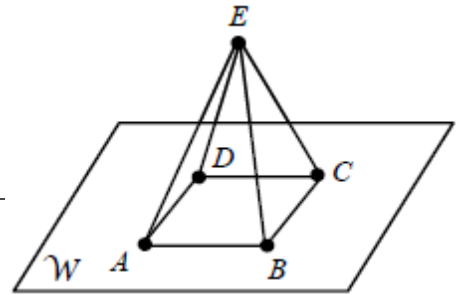
Use the diagram to the right to answer questions 1-4.

1. Name two points collinear to point K. _____
2. Give another name for line b. _____
3. Name the intersection of line c and plane R. _____
4. Name a point non-coplanar to plane R. _____



Use the diagram to the right to answer questions 5-8.

5. How many planes are shown in the figure? _____
6. Give another name for plane W. _____
7. Name the intersection of plane ADE and plane W. _____
8. Name a point non-collinear to points A and B. _____

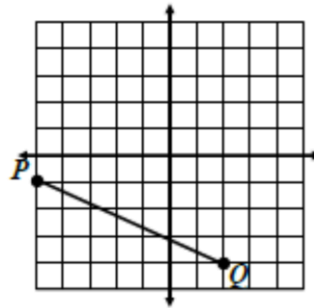


Topic #2: Distance & Midpoint

$$\text{distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \quad MP = \left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$$

9. Find ST if $S(-3, 10)$ and $T(-2, 3)$.

10. Given the graph below. Find PQ .

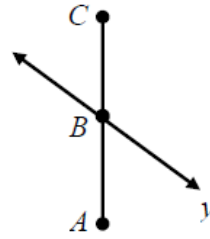


11. Find the coordinates of the midpoint of \overline{HK} if $H(-1, 2)$ and $K(-7, -4)$.

12. Find the coordinates of Z if Y is the midpoint of \overline{XZ} , $X(-10, 9)$ and $Y(-4, 8)$.

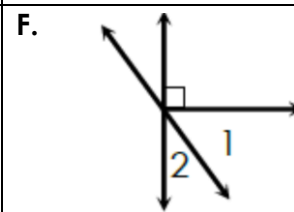
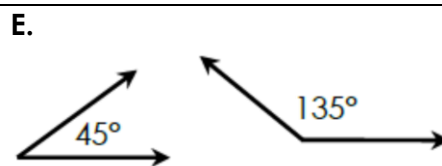
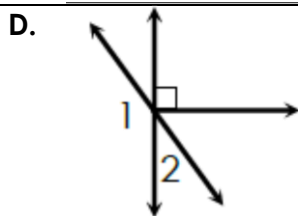
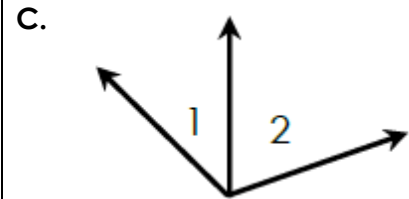
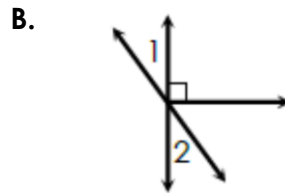
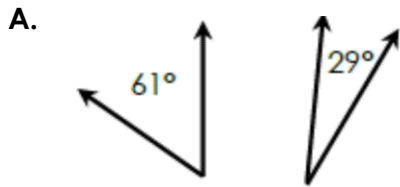
13. If S is the midpoint of \overline{RT} , $RS = 5x + 17$, and $ST = 8x - 31$, find RS .

14. If line y bisects \overline{AC} , $AB = 4 - 5x$, and $BC = 2x + 25$, find AC .



Topic #3: Angle Relationships

Use the diagrams below to answer 15-19



15. Which diagram(s) show adjacent angles? _____

16. Which diagram(s) show vertical angles? _____

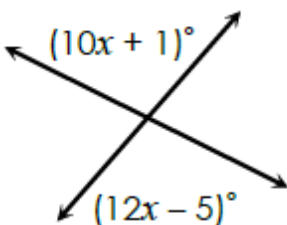
17. Which diagram(s) show complementary angles? _____

18. Which diagram(s) show supplementary angles? _____

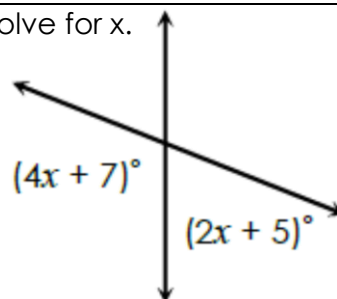
19. Which diagram(s) show a linear pair? _____

Topic #4: Solving Angle Problems

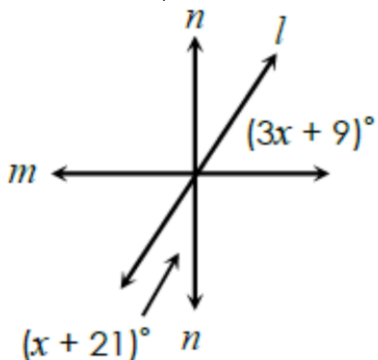
20. Solve for x .



21. Solve for x .



22. If $m \perp n$, solve for x .

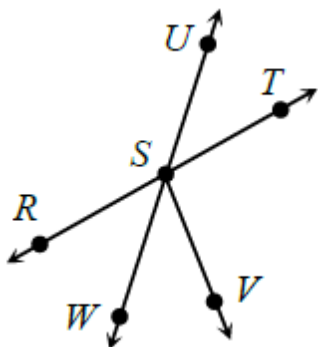


23. $\angle 1$ and $\angle 2$ form a linear pair. If $m\angle 1 = 18x - 1$ and $m\angle 2 = 23x + 17$, find $m\angle 2$.

24. $\angle G$ and $\angle H$ are complementary angles. If $m\angle G = 6x - 15$ and $m\angle H = 3x + 6$, find $m\angle H$.

25. $\angle 1$ and $\angle 2$ are vertical angles. If $m\angle 1 = 5x + 12$ and $m\angle 2 = 6x - 11$, find $m\angle 1$.

26. If $\overline{SV} \perp \overline{RT}$, $m\angle RSU = 17x - 3$, and $m\angle UST = 6x - 1$, find each missing measure.



$$x = \underline{\hspace{2cm}}$$

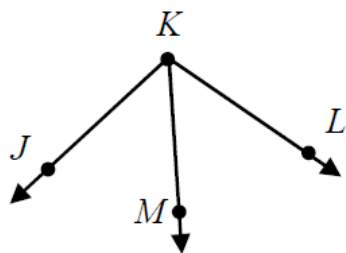
$$m\angle RSU = \underline{\hspace{2cm}}$$

$$m\angle UST = \underline{\hspace{2cm}}$$

$$m\angle WSV = \underline{\hspace{2cm}}$$

$$m\angle VSU = \underline{\hspace{2cm}}$$

27. If \overline{KM} bisects $\angle JKL$, $m\angle JKL = 92^\circ$, and $m\angle MKL = 5x + 1$, find the value of x .



28. If \overline{EF} bisects $\angle AED$, $m\angle AEF = 4x + 3$, and $m\angle FED = 7x - 33$, find $m\angle CEB$.

