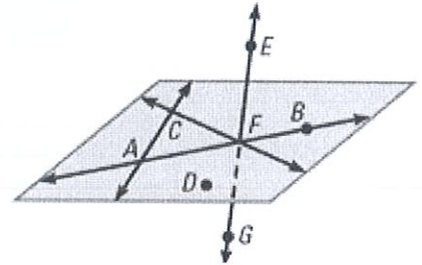


Geometry Final Review Practice

Name: Key

Chapter 1 Questions

In problems #1-5 use the diagram to the right.



1) Name three points that are collinear. Then give a name for the line that contains the points.

2) Name the intersection of plane ABC and \overleftrightarrow{EG}

F

3) Name two pairs of opposite rays.

4) Are points A, C, and G coplanar? Explain

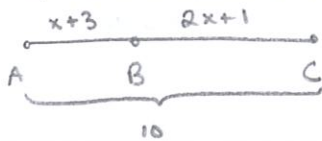
Yes -

5) Name a line that intersects plane AFD at more than one point.

\overleftrightarrow{AC} \overleftrightarrow{AF}

6) Point B is between A and C on \overline{AC} . Use the given information to write an equation in terms of x . Solve the equation. Then find AB and BC, and determine whether \overline{AB} and \overline{BC} are congruent.

a) $AB = x + 3$, $BC = 2x + 1$ & $AC = 10$.



$$AB = x + 3 = 5$$

$$BC = 2(2) + 1 = 5$$

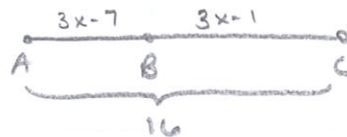
$$x + 3 + 2x + 1 = 10$$

$$3x + 4 = 10$$

$$3x = 6$$

$$x = 2$$

b) $AB = 3x - 7$, $BC = 3x - 1$, & $AC = 16$.



$$3x - 7 + 3x - 1 = 16$$

$$6x - 8 = 16$$

$$6x = 24$$

$$x = 4$$

$$AB = 3(4) - 7 = 5$$

$$BC = 3(4) - 1 = 11$$

7) Find the midpoint of the coordinates.

a) A (2, -4) B (7, 1)

$$md: \left(\frac{2+7}{2}, \frac{-4+1}{2} \right)$$

$$\left(\frac{9}{2}, \frac{-3}{2} \right)$$

$$(4.5, -1.5)$$

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

3) Find the length of the segment with given endpoints.

a) R (4,3) S (1,7)

$$d = \sqrt{(4-1)^2 + (3-7)^2}$$

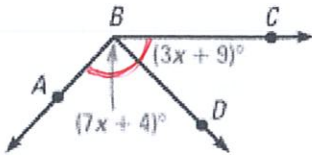
$$= \sqrt{(3)^2 + (-4)^2}$$

$$= \sqrt{9+16} = \sqrt{25} = 5$$

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

9)

Given $m\angle ABC = 133^\circ$, find $m\angle ABD$.



$$7x+4 + 3x+9 = 133$$

$$10x+13 = 133$$

$$10x = 120$$

$$x = 12$$

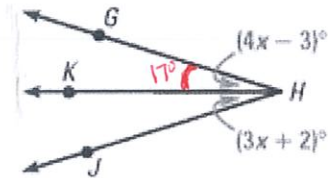
$$m\angle ABD = 7(12)+4$$

$$= 84+4$$

$$= 88^\circ$$

10)

Given $m\angle GHK = 17^\circ$, find $m\angle KHJ$.



$$4x-3 = 17$$

$$4x = 20$$

$$x = 5$$

$$m\angle KHJ = 3(5)+2$$

$$= 15+2$$

$$= 17^\circ$$

11) $\angle A$ and $\angle B$ are complementary. One angle is 24° greater than the other. What are the measures of $\angle A$ and $\angle B$?

$$m\angle A = x$$

$$m\angle B = x+24$$

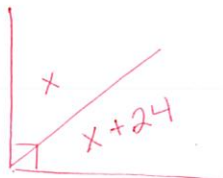
$$x + x+24 = 90$$

$$2x = 66$$

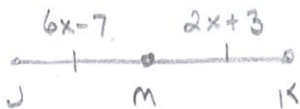
$$x = 33$$

$$m\angle A = 33^\circ$$

$$m\angle B = 57^\circ$$



12) Point M is the midpoint of \overline{JK} . Find JK when $JM=6x-7$ and $MK=2x+3$.



$$6x-7 = 2x+3$$

$$4x = 10$$

$$x = 2.5$$

$$JK = 6(2.5)-7 + 2(2.5)+3$$

$$JK = 16$$