Name: Key

Date: _____ Period: _____

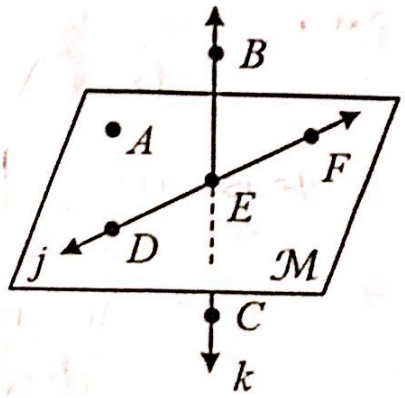
Geometry

Chapter 1: Geometry Basics

Quiz 1 Review

Topic 1: Points, Lines and Planes

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



1. Give a name for the line containing point F.

$\overleftrightarrow{DE}$, $\overleftrightarrow{EF}$, $\overleftrightarrow{DF}$, line j

2. Give another name for plane *M*.

Plane DAE, Plane FAD, Plane AEF...

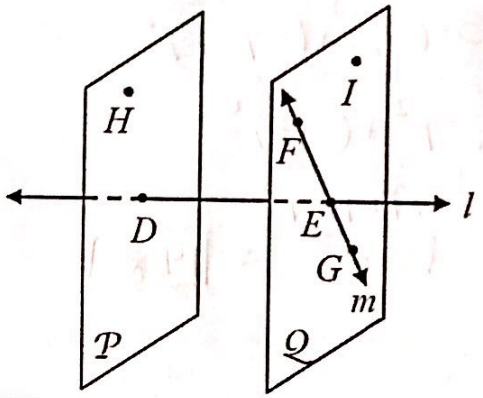
3. Give an example of three non-collinear points.

B, D, A ; F, C, A ; B, C, A ...

4. Give the intersection of plane *M* and line *k*.

E

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



5. Give the intersection of lines *l* and *m*

E

6. Give another name for plane *Q*.

Plane FIG, Plane EGI, Plane FIE

7. Are points *D* and *E* collinear or coplanar?

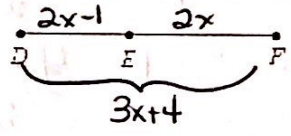
Collinear

8. How many times to planes *P* and *Q* intersect?

none

Topic 2: Segment Addition Postulate and Midpoints

9. E is between D and F. $DE = 2x - 1$, $EF = 2x$, and $DF = 3x + 4$. Find the value of x.



$2x-1+2x=3x+4$

$4x-1=3x+4$

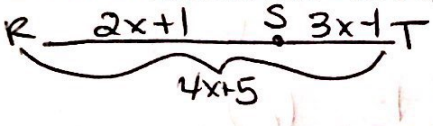
$-3x \quad -3x$

$x-1=4$

$+1 \quad +1$

$x=5$

10. S is between R and T. $RS = 2x + 1$, $ST = 3x - 2$, and $RT = 4x + 5$. Find RS.



$2x+1+3x-1=4x+5$

$5x=4x+5$

$-4x \quad -4x$

$x=5$

$RS = 2(5)+1$

$10+1$

11

Use the diagram to the right to answer questions 11-13.

11. B is the midpoint of segment AC. If $AB = 8$, what is the measure of BC? What is AC?

8 ↓ 16 ↓

12. B is the midpoint of segment AC. IF $AB = 4x - 5$ and $BC = 2x + 7$, find the value of x.

$4x - 5 = 2x + 7$

$-2x \quad -2x$

$2x - 5 = 7$

$+5 \quad +5$

$\frac{2x}{2} = \frac{12}{2}$

$x = 6$

13. B is the midpoint of segment AC. If $AB = 3x + 4$ and $AC = 15x - 10$, find AC.

$3x + 4 + 3x + 4 = 15x - 10$

$6x + 8 = 15x - 10$

$-6x \quad -6x$

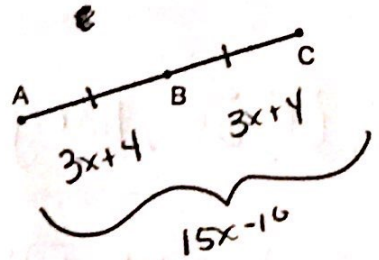
$8 = 9x - 10$

$+10 \quad +10$

$\frac{18}{9} = \frac{9y}{9}$

$x = 2$

$AC = 15(2) - 10 = 30 - 10 = \boxed{20}$



Topic 3: Midpoint & Distance Formula $d = \sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$ $MP = \left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$

Find the distance between the following points for #14-15.

14. (-4,6) and (3,-7)

$x_1, y_1 \quad x_2, y_2$

$\sqrt{(3-(-4))^2+(-7-6)^2}$

$\sqrt{7^2+(-13)^2}$

$\sqrt{49+169}$

$\sqrt{218} = \boxed{14.8}$

15. (-1,4) and (1,-1)

$x_1, y_1 \quad x_2, y_2$

$\sqrt{(1-(-1))^2+(-1-4)^2}$

$\sqrt{2^2+(-5)^2}$

$\sqrt{4+25}$

$\sqrt{29}$

$\boxed{5.4}$

Find the midpoint or endpoint based on the questions below.

16. Midpoint between (5,8) and (-1,-4).

$x_1, y_1 \quad x_2, y_2$

$\left(\frac{-1+5}{2}, \frac{-4+8}{2}\right)$

$\frac{4}{2} \quad \frac{4}{2}$

$(2, 2)$

17. Find the missing endpoint M if K is the midpoint of $\overline{LM}$ given K(2,-1) and L(-9,4).

$x_m, y_m \quad x_1, y_1$

$x_{MP} = \frac{x_1+x_2}{2} \qquad y_{MP} = \frac{y_1+y_2}{2}$

$2(2) = \left(\frac{-9+x}{2}\right)2 \qquad 2(-1) = \left(\frac{4+y}{2}\right)2$

$4 = -9 + x \qquad -2 = 4 + y$

$+9 \quad +9 \qquad -4 \quad -4$

$13 = x \qquad -6 = y$

$\boxed{(13, -6)}$