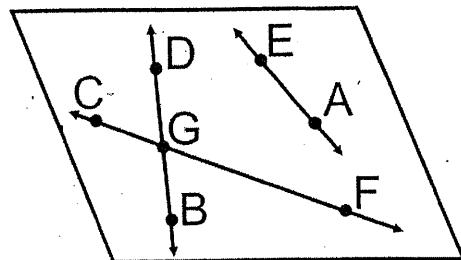


Review for 1st Semester Final Exam (Day 1)

1. Name the three lines in the picture.



Questions #1 - 6

2. Is Plane DGB a good name for the plane? **NO**

Why or why not? If not, what would be a better name?

The 3 points cannot be collinear and D, G, & B are collinear. Better names would include

- Plane CGD
- Plane GBF
- Plane CEF

etc...

3. Describe everything you know about $\angle CGD$ and $\angle FGD$.

The angles are a linear pair.
 The angles are supplementary.
 The sum of their measures is 180° .

4. Describe everything you know about $\angle CBG$ and $\angle FGD$.

The angles are Vertical Angles.
 They are congruent to each other.
 Their measures are equal.

5. $CG = 2x + 3$, $GF = 5x - 11$, and $CF = 6x - 1$. Find CF . Show all work.

$$CG + GF = CF$$

$$(2x + 3) + (5x - 11) = 6x - 1$$

$$7x - 8 = 6x - 1$$

$$x = 7$$

$$CF = 6x - 1$$

$$CF = 6(7) - 1$$

$$CF = 41$$

6. G is the midpoint of \overline{BD} . $DG = 10x - 7.5$ and $DB = 11x + 7.5$. Find BG . Show all work. $DG = BG$

$$DG + GB = DB$$

$$(10x - 7.5) + (10x - 7.5) = 11x + 7.5$$

$$20x - 15 = 11x + 7.5$$

$$9x = 22.5$$

$$x = 2.5$$

$$BG = 10x - 7.5$$

$$BG = 10(2.5) - 7.5$$

$$BG = 17.5$$

7. Describe how to identify when two lines are perpendicular.

The slopes of the lines will be opposite reciprocals.

ex: $m = 1/3$ and $m = -3/1$

Describe how to identify when two lines are parallel.

The slopes of the lines will be the same.

ex: $m = 1/2$ and $m = 3/6$
 $m = 1/2$