

W-6 Geometry 9/21 Week 3

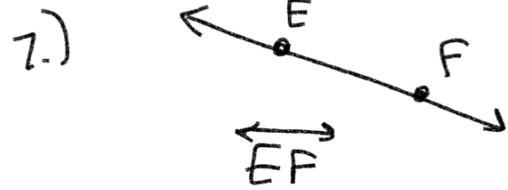
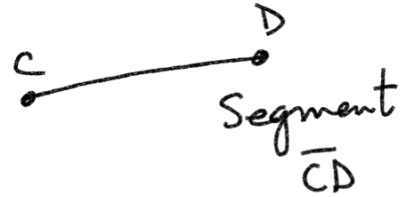
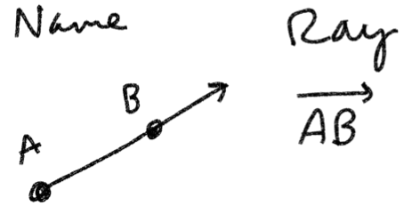
1.) 5, 12, 19, 26, ... 33
 $+7 \quad +7 \quad +7 \quad +7$

2.) 1, 4, 9, 16, 25, ... 36
 $3 \quad 5 \quad 7 \quad 9 \quad 11$

Adding consecutive
odd numbers
or
perfect
squares (n.)

3.) 203, 304, 405, 506, ... 607
 $+101 \quad +101 \quad +101$

4.) 2, 3, 5, 7, 11, 13, ... 17
 prime numbers



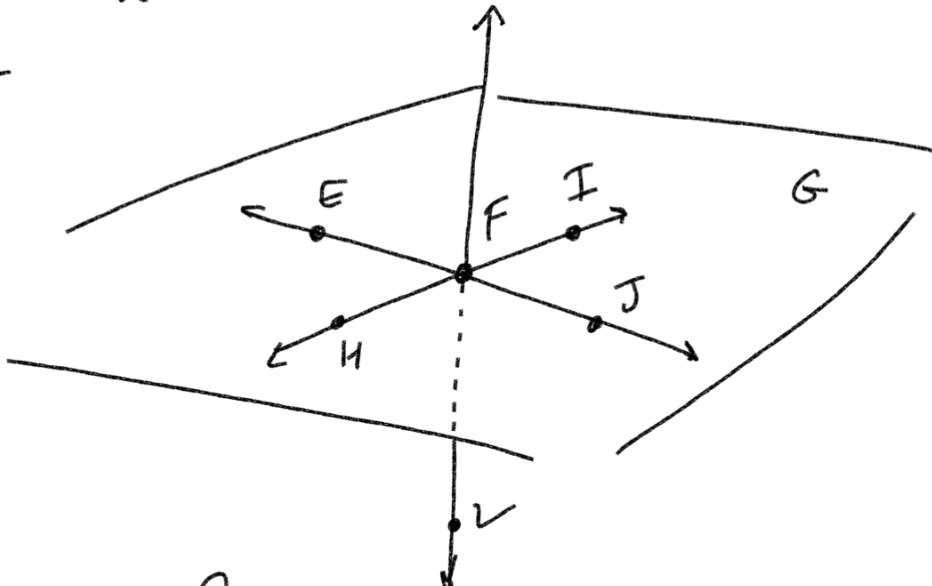
Plane G

Name

EFI

HJF

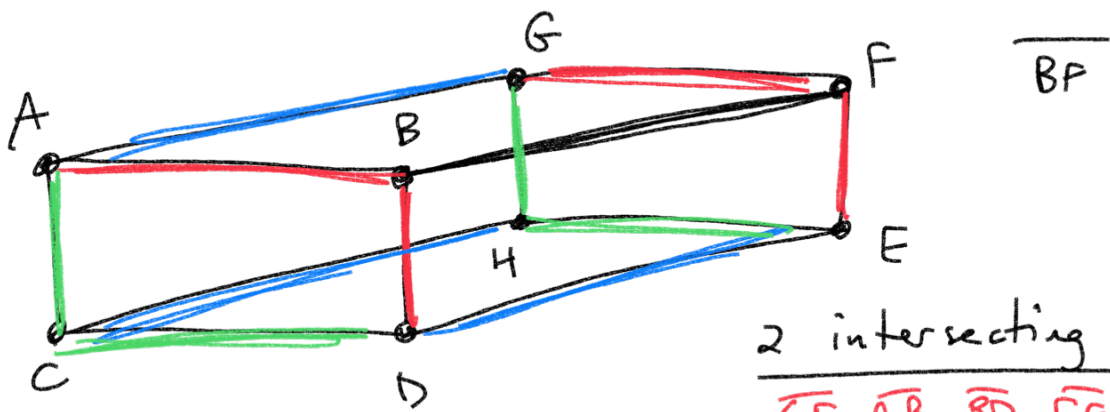
HFE



Requirement for a plane

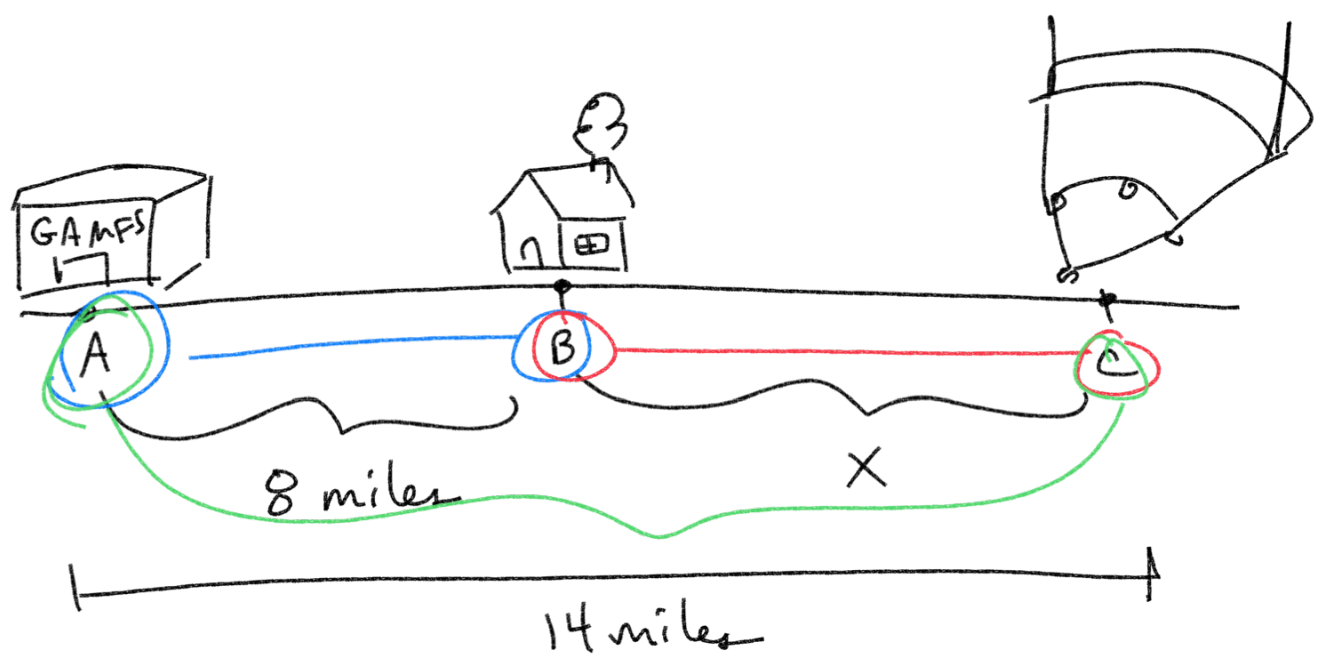
One noncollinear point and a line
or

three noncollinear points



2 intersecting lines
 $\overline{GF}, \overline{AB}, \overline{BD}, \overline{FE}$
2 parallel lines
 $\overline{DE}, \overline{CH}, \overline{AG}$
2 skew lines
 $\overline{CD}, \overline{HE}, \overline{AC}, \overline{GH}$

1-4 Segment Addition Postulate (SAP)



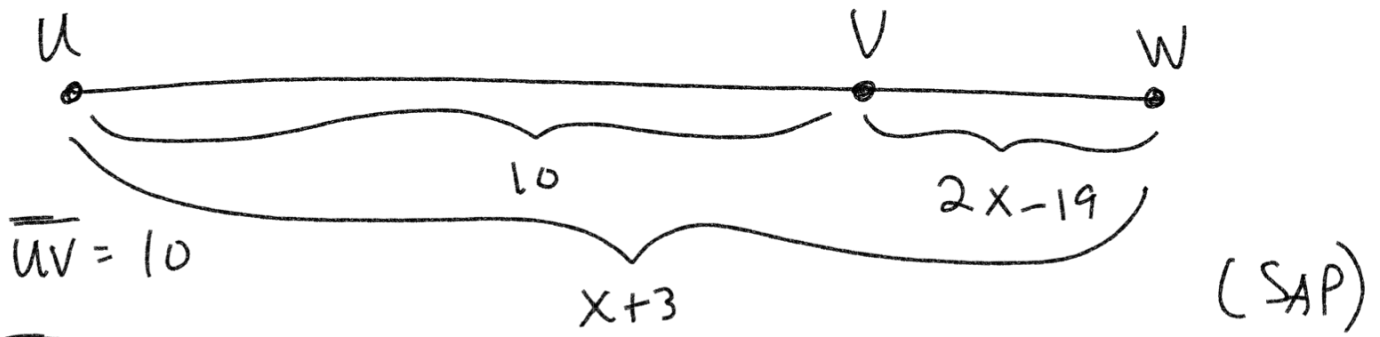
Segment Addition Postulate

$$\overline{AB} + \overline{BC} = \overline{AC}$$

$$8 + x = 14$$

$$8 + x = 14$$

$$\begin{array}{r} -8 \quad -8 \\ \hline x = 6 \end{array}$$



$$\overline{UV} = 10$$

$$\overline{VW} = 2x - 19$$

$$\overline{UW} = x + 3$$

Segment Addition Postulate

$$\Rightarrow \overline{UV} + \overline{VW} = \overline{UW}$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$10 + 2x - 19 = x + 3$$

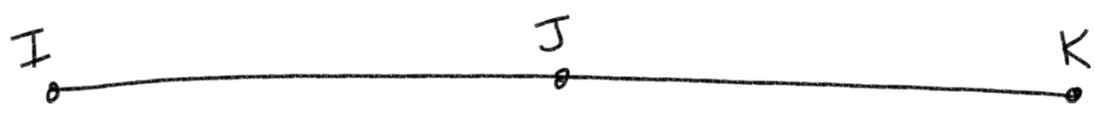
$$2x - 9 = x + 3$$

$$-x \quad -x$$

$$x - 9 = 3$$

$$+9 \quad +9$$

$$\boxed{x = 12}$$



$$\overline{IJ} = 11$$

$$\overline{JK} = 2x - 13$$

$$\overline{IK} = x + 8$$

Segment Addition Postulate

$$\overline{IJ} + \overline{JK} = \overline{IK}$$

$$\boxed{11} + 2x \boxed{-13} = x + 8$$

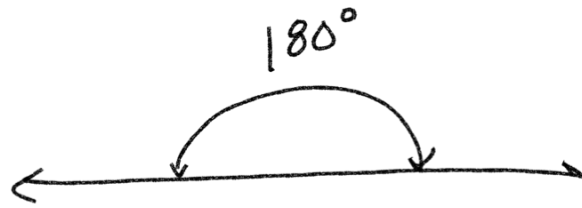
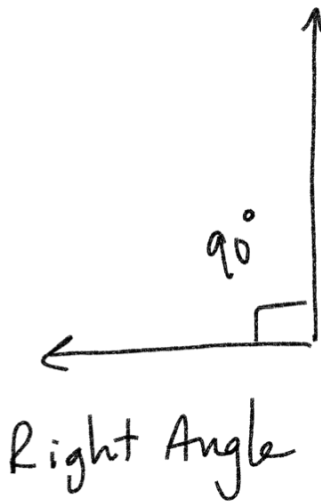
$$2x - 2 = x + 8$$

$$-x \quad -x$$

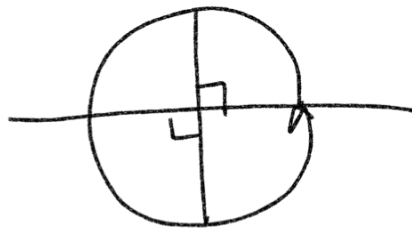
$$x - 2 = 8$$

$$+2 \quad +2$$

$$\boxed{x = 10}$$



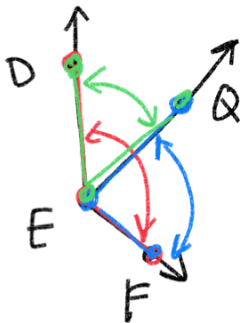
straight line
(2 right angles)



Degrees in a
Circle

360° 2 lines
or
4 right angles

Angle Addition Postulate (AAP)



$$m\angle DEF = 30x - 5$$

$$m\angle QEF = 126^\circ$$

$$m\angle DEQ = 9x - 5$$

$$\boxed{\angle DEQ} + \boxed{\angle QEF} = \boxed{\angle DEF}$$

$$9x - 5 + 126 = 30x - 5$$

$$9x + 121 = 30x - 5$$

$$\begin{array}{r} -9x \\ \hline 121 = 21x - 5 \end{array}$$

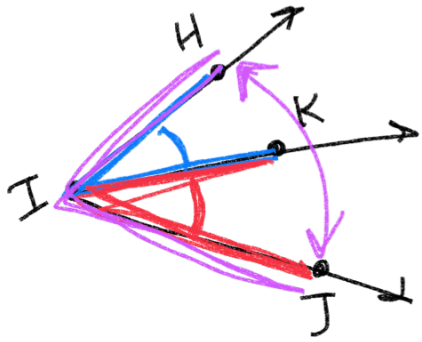
$$121 = 21x - 5$$

$$\begin{array}{r} +5 \\ \hline 126 = 21x \end{array}$$

$$126 = 21x$$

$$\frac{126}{21} = \frac{21x}{21}$$

$$\boxed{6 = x}$$



$$\angle KIJ = 5x + 4$$

$$\angle HIK = 2x + 14$$

$$\angle HIJ = 74$$

$$\angle HIK + \angle KIJ = \angle HIJ$$

$$2x + 14 + 5x + 4 = 74$$

$$7x + 18 = 74$$

$$\begin{array}{r} -18 \quad -18 \\ \hline \end{array}$$

$$\frac{7x}{7} = \frac{56}{7}$$

$$x = 8$$