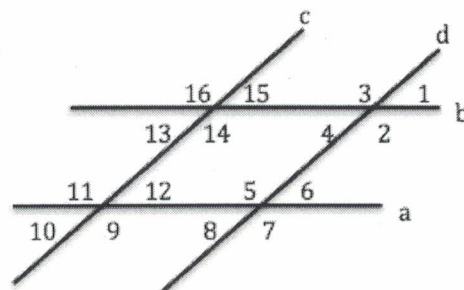


1.) Identify 1 pair of angles that are:

- a.) Corresponding Angles $\angle 3$ and $\angle 5$
- b.) Alternate Interior Angles $\angle 12$ and $\angle 13$
- c.) Alternate Exterior Angles $\angle 6$ and $\angle 10$
- d.) Same Side Interior Angles $\angle 8$ and $\angle 9$

LOTS OF ANSWERS POSSIBLE!

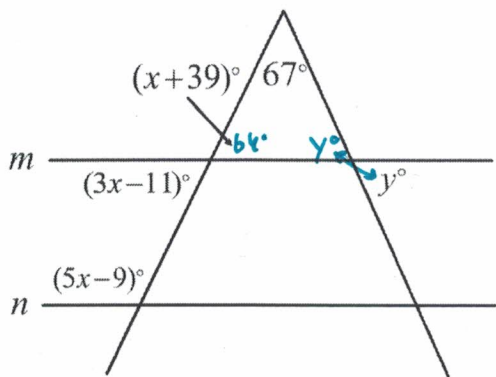
Use the diagram for questions (1) and (2).



2.) Identify which lines are parallel and your reason (AIA, AEA, Corresponding, SSI, SSE)

- a.) If $\angle 4 \cong \angle 6$, which lines are parallel (circle one) $a \parallel b$ or $c \parallel d$? Reason: \cong AIA \rightarrow 11 LINES
- b.) If $\angle 10 \cong \angle 15$, which lines are parallel (circle one) $a \parallel b$ or $c \parallel d$? Reason: \cong AEA \rightarrow 11 LINES
- c.) If $\angle 2 \cong \angle 14$, which lines are parallel (circle one) $a \parallel b$ or $c \parallel d$? Reason: \cong CORR. \angle \rightarrow 11 LINES
- d.) If $\angle 11 \cong \angle 16$, which lines are parallel (circle one) $a \parallel b$ or $c \parallel d$? Reason: \cong CORR. \angle \rightarrow 11 LINES

3.)



a.) Given the diagram, is $m \parallel n$? Show your work.

VERTICAL \angle s
 $3x - 11 = x + 39$
 $2x = 50$
 $x = 25$

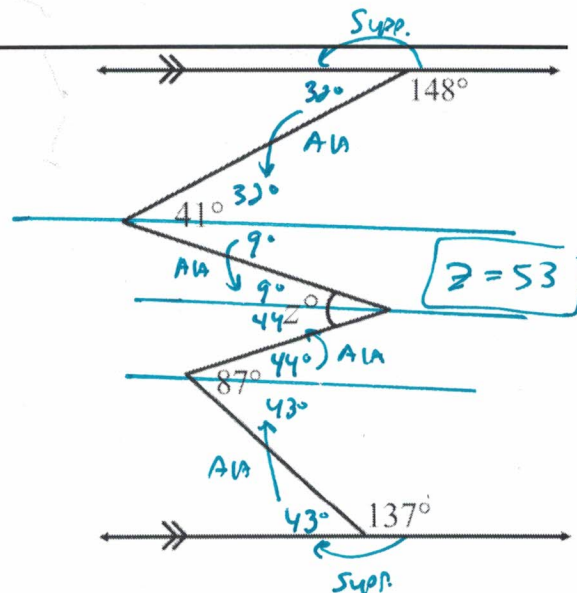
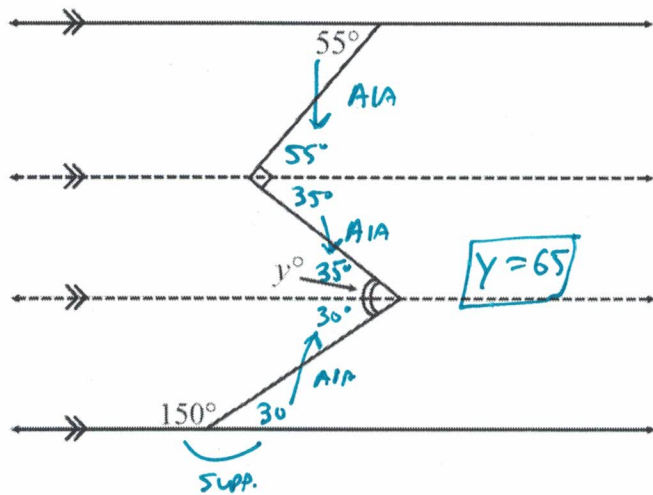
$2(25) - 11 = 64^\circ$
 $5(25) - 9 = 116^\circ$

SSI SUPP.
YES $m \parallel n$

b.) Find the value of y .

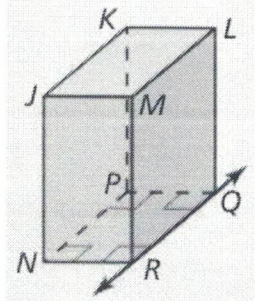
$y + 64 + 67 = 180$
 $y = 49$

4.) Find the value of the missing variable in the Crook problems below.



5.) Use the diagram to answer the following questions. You may assume any lines that appear to be parallel or perpendicular are so.

a.) Is $\overline{JK} \parallel \overline{RQ}$? YES. \overline{JK} APPEARS TO BE PARALLEL TO \overline{ML} , \overline{NP} , \overline{RQ}



b.) Are \overline{ML} and \overline{KP} skew lines? Briefly explain.
 YES. THEY ARE
 1. NOT PARALLEL
 2. DO NOT INTERSECT

6.) Find the measure of each angle in the triangle below.

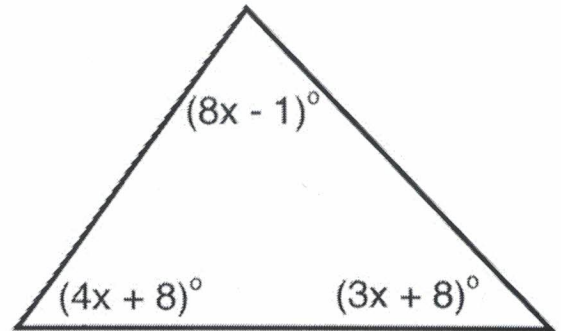
$$8x - 1 + 4x + 8 + 3x + 8 = 180$$

$$15x + 15 = 180$$

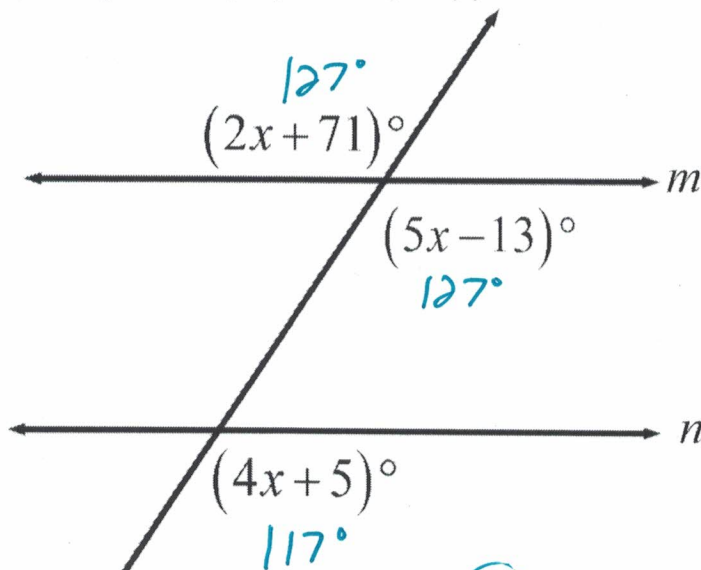
$$15x = 165$$

$$x = 11$$

$$\left. \begin{array}{l} 8(11) - 1 = 87^\circ \\ 4(11) + 8 = 52^\circ \\ 3(11) + 8 = 41^\circ \end{array} \right) = 180^\circ$$



7.) Is $m \parallel n$? Briefly explain and justify your answer.



★
MUST START W/ VERTICAL ANGLES

$$2x + 71 = 5x - 13$$

$$3x = 84$$

$$x = 28$$

$$2(28) + 71 = 127^\circ$$

$$5(28) - 13 = 127^\circ$$

$$4(28) + 5 = 117^\circ$$

NO, $m \parallel n$ BECAUSE $127^\circ \neq 117^\circ$.

$$\begin{array}{l} 5x - 13 = 4x + 5 \\ x = 18 \end{array}$$

WRONG, CANNOT ASSUME
CORR. ANGLES \cong .

$$\begin{array}{l} 2x + 71 = 4x + 5 \\ x = 33 \end{array}$$

WRONG, CANNOT ASSUME
ALFA \cong .