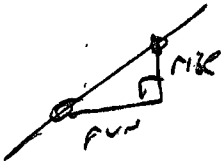
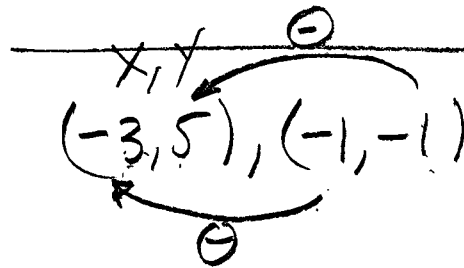


3.  $(-3, 5), (-1, -1)$  Find S-I Form OF LINE.

Find distance

Find midpoint



$$m = \frac{\text{rise}}{\text{run}} = \frac{-1-5}{-1+3} = \frac{-6}{2} = -3 = m$$

$$y = mx + b$$

$$5 = -3(-3) + b$$

$$5 = 9 + b$$

$$-4 = b$$

$$y = -3x - 4$$

$$d^2 = (-6)^2 + (2)^2 = 40$$

$$d = \sqrt{40} = 2\sqrt{10}$$

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

unique S-I Form =  $y = mx + b$ .

unique Std. Form =  $Ax + By = C$

$A > 0$

(are integers)  
A, B, C are not fractions

EX

$$y = -3x - 4$$

$$3x + y = -4$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

KNOW  $m$

AND ONE POINT  
[call it  $(x_1, y_1)$ ]

$$m = \frac{y - y_1}{x - x_1}$$

$$m(x - x_1) = y - y_1$$

↑  
SLOPE

↑  
POINT

POINT-SLOPE FORM

⑪  $(2, -1), (-3, -3)$  WRITE P-S Form

$$\frac{-3+1}{-3-2} = \frac{-2}{-5} = \frac{2}{5} = m$$

$$m(x-x_1) = y-y_1$$

$$\boxed{\frac{2}{5}(x-2) = y+1}$$

NOT  
UNIQUE

$$\frac{2}{5}x - \frac{4}{5} = y+1$$

$$\boxed{\frac{2}{5}x - \frac{9}{5} = y}$$

UNIQUE

$$\boxed{\frac{2}{5}(x+3) = y+3}$$

PS NOT UNIQUE

$$\frac{2}{5}x + \frac{6}{5} = y+3$$

$$\begin{array}{r} -\frac{15}{5} \end{array}$$

$$\boxed{\frac{2}{5}x - \frac{9}{5} = y}$$

$$(17) \quad |x+10| > 14$$

$$x+10 > 14$$

$$-10 \quad -10$$

$$x > 4$$

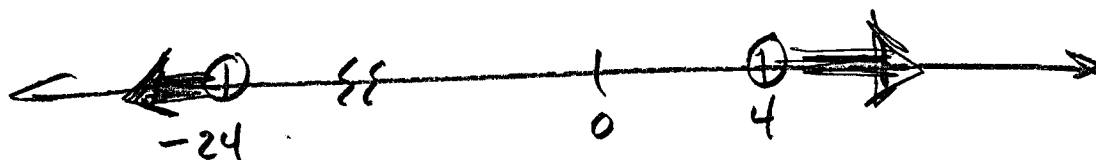
$$-(x+10) > 14$$

$$x+10 < -14$$

$$-10 \quad -10$$

$$x < -24$$

OR



$$\{x \mid x > 4 \cup x < -24\}$$

OR

$$(-\infty, -24) \text{ OR } (4, +\infty)$$