39
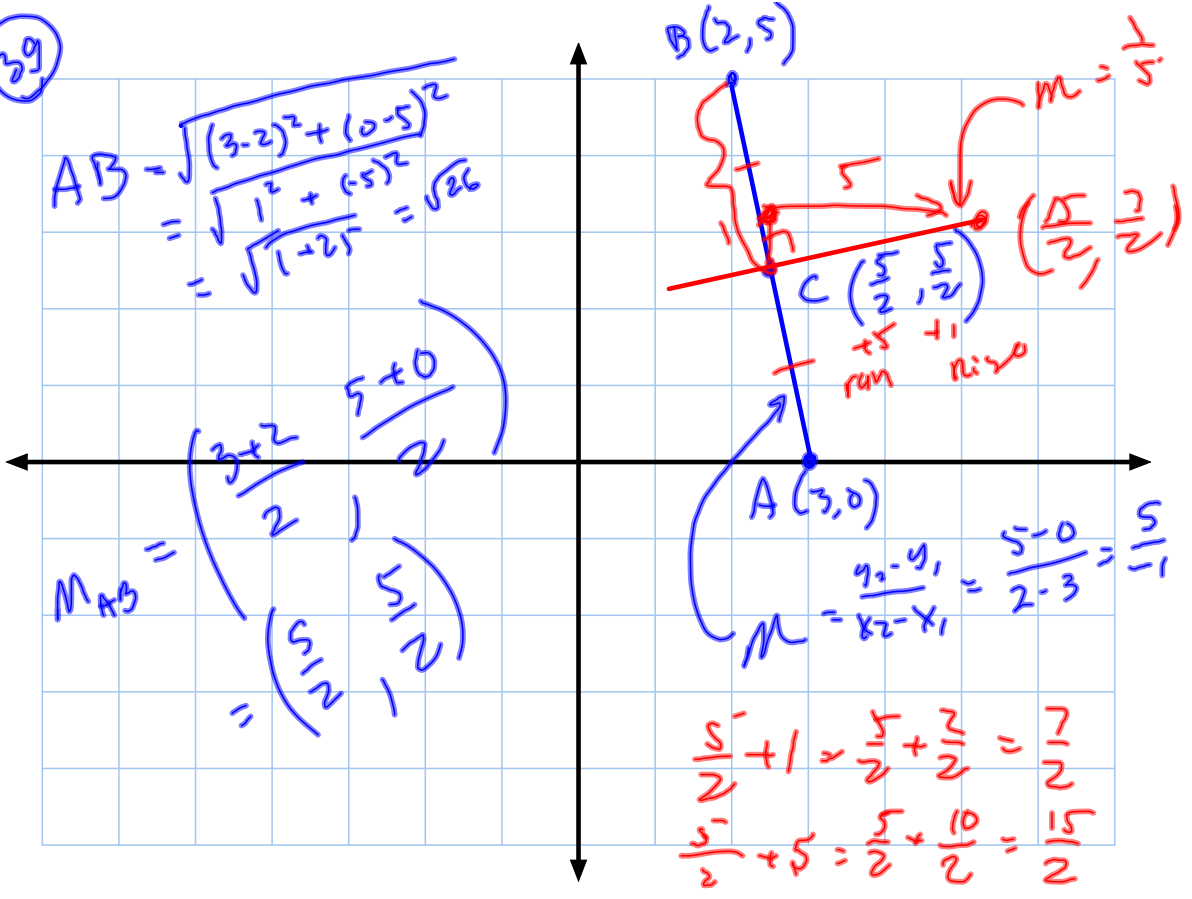
$$AB = \sqrt{(3-2)^2 + (0-5)^2}$$
$$= \sqrt{1^2 + (-5)^2}$$
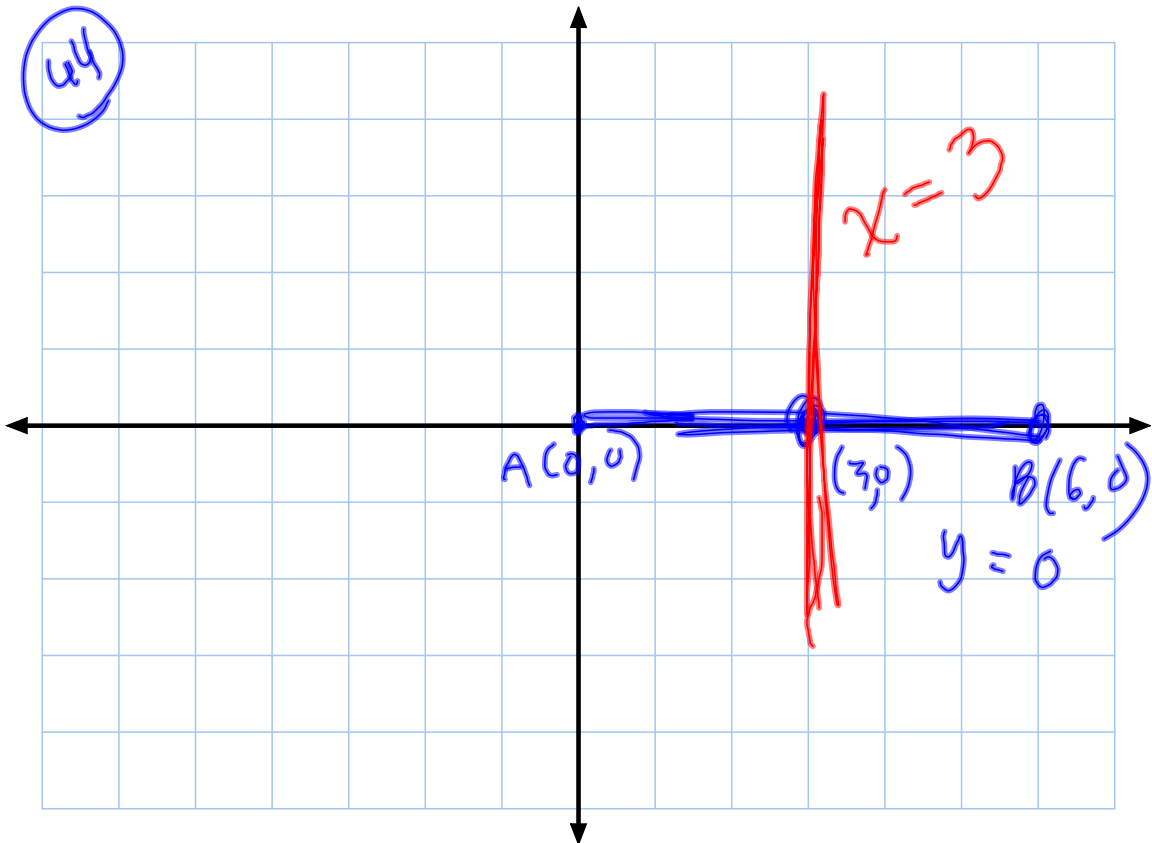$$= \sqrt{1+25} = \sqrt{26}$$
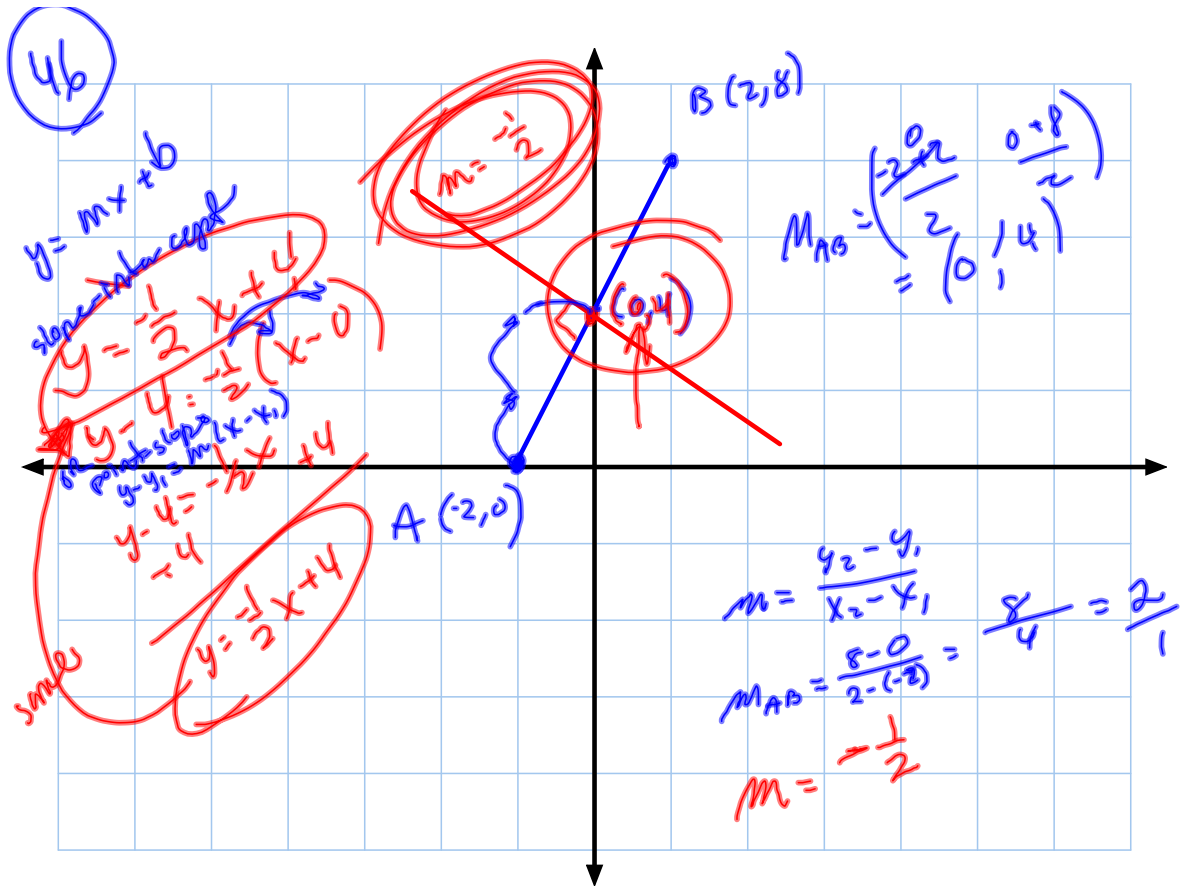
$$M_{AB} = \left(\frac{3+2}{2}, \frac{5+0}{2}\right)$$
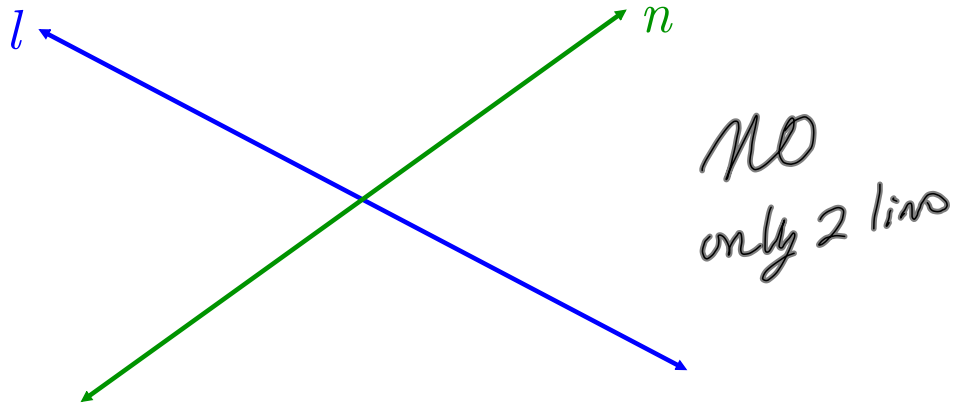$$= \left(\frac{5}{2}, \frac{5}{2}\right)$$

B(2,5)

$m = \frac{1}{5}$

5

$\left(\frac{5}{2}, \frac{7}{2}\right)$

$C\left(\frac{5}{2}, \frac{5}{2}\right)$

$+5$ $+1$
run   rise

A(3,0)

$$M = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5-0}{2-3} = \frac{5}{-1}$$

$$\frac{5}{2} + 1 = \frac{5}{2} + \frac{2}{2} = \frac{7}{2}$$
$$\frac{5}{2} + 5 = \frac{5}{2} + \frac{10}{2} = \frac{15}{2}$$

44

$x = 3$

A(0,0)   (3,0)   B(6,0)

$y = 0$

1

4b

$y = mx + b$
slope → intercept

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

$y - 4 = \frac{-1}{2}(x - 0)$

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

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

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

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

same

$m = -\frac{1}{2}$

$B(2,8)$

$(0,4)$

$A(-2,0)$

$M_{AB} = \left(\frac{-2+2}{2}, \frac{0+8}{2}\right) = (0, 4)$

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

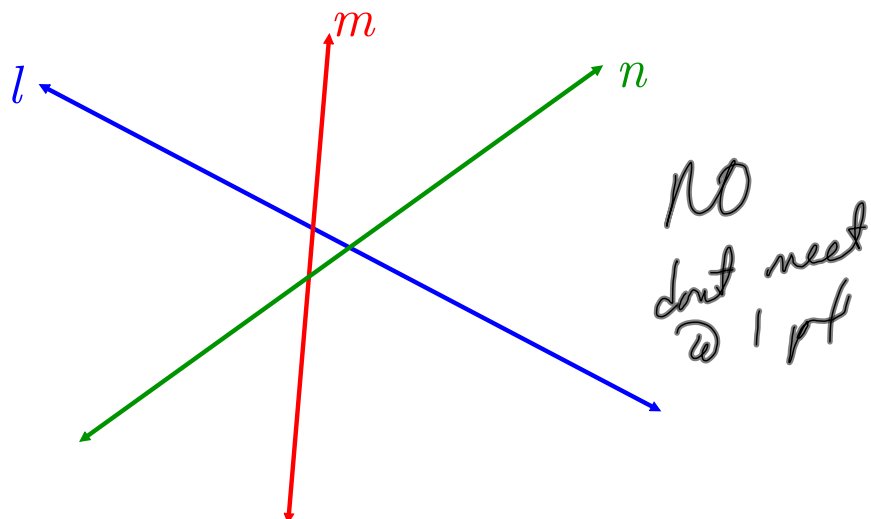$M_{AB} = \frac{8-0}{2-(-2)} = \frac{8}{4} = \frac{2}{1}$

$m = -\frac{1}{2}$

Definition: Concurrent Lines

≥ 3 lines that intersect @ 1 pt

2

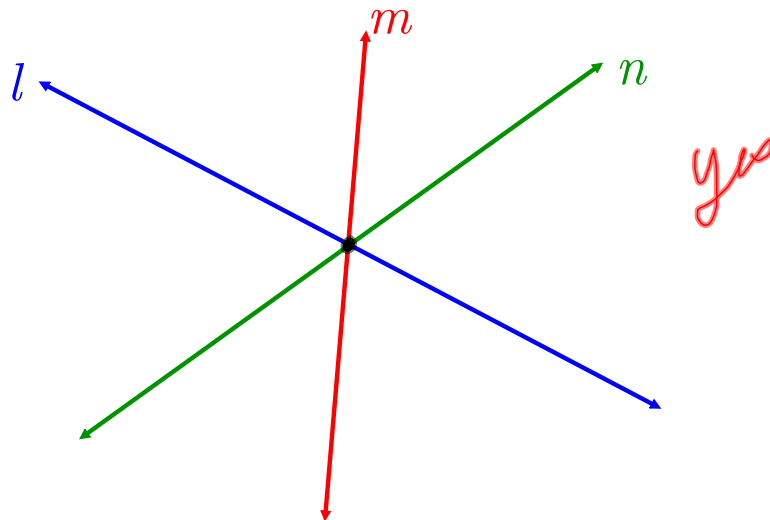## Definition: Concurrent Lines

≥ 3 lines that intersect @ 1 pt

l n

NO
only 2 line

Definition: Concurrent Lines

≥ 3 lines that intersect @ 1 pt

m l n
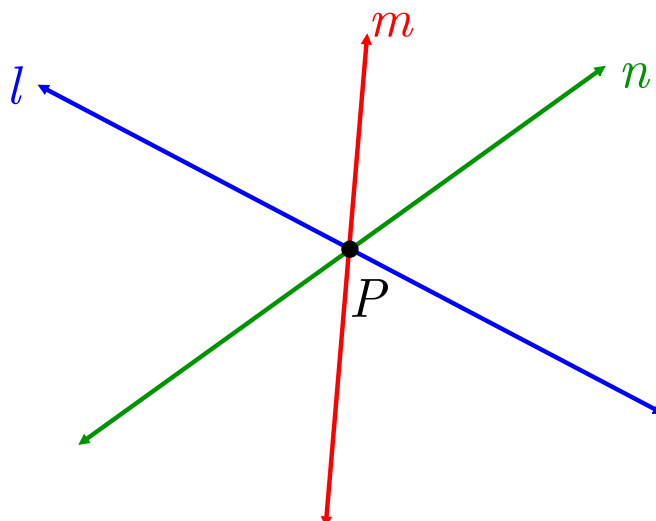
NO
dont meet
@ 1 pt

Definition: Concurrent Lines

≥ 3 lines that intersect @ 1 pt

Definition: Point of Concurrency
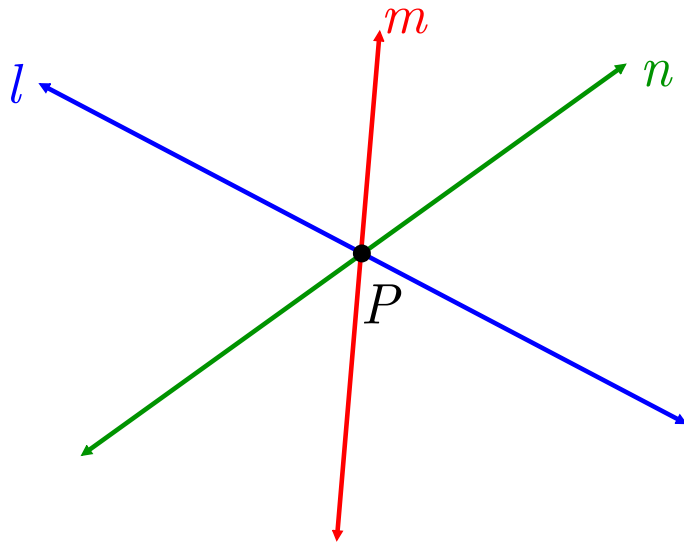
Pt concurrent lines meet @

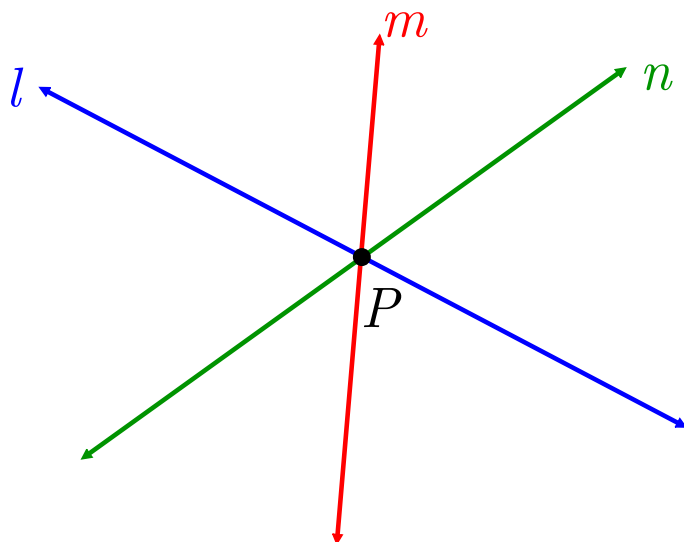## Definition: Point of Concurrency

Pt concurrent lines meet @

pt *P* is the point of concurrency for _____?_____

m

l *n*

P

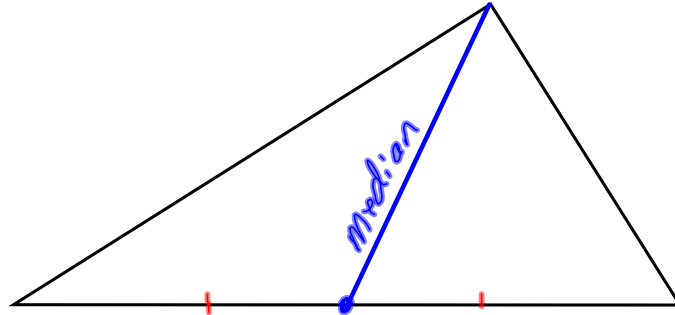## Definition: Point of Concurrency

Pt concurrent lines meet @

pt *P* is the point of concurrency for lines *l, m & n*.

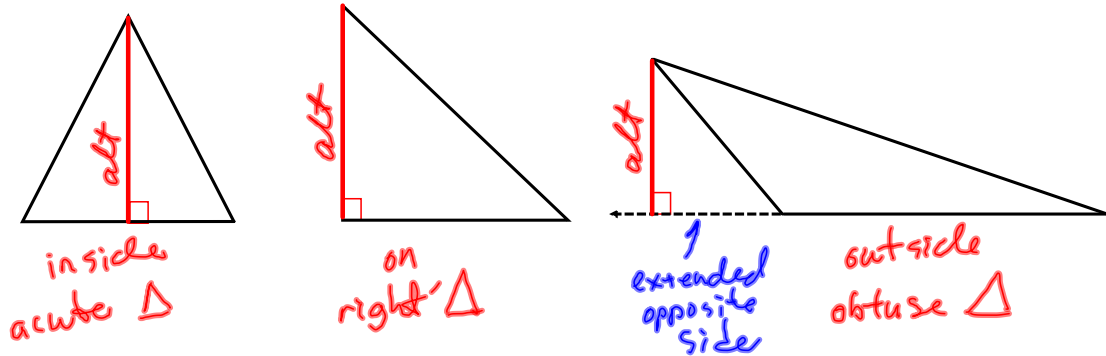*m*

l *n*

P

Definition: Median

Seg whose endpts are a vertex & midpt of opp side

Definition: Altitude

$\perp$ seg from a vertex to the line containing the opp side.

May be in, out or on Δ.

Definition: Circle
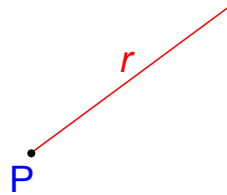
The set of all pts equidistant from a given pt.

Definition: Circle

The set of all pts equidistant from a given pt.

$\bullet$
P

Definition: Circle

The set of all pts equidistant from a given pt.

Definition: Circle

The set of all pts equidistant from a given pt.