

Good afternoon

When the bell rings, we'll randomize and take our formula quiz

Afterwards, we will look over the similarity review (big sheet from Weds.) and then start reviewing 'coordinate geometry' (graphing on the plane)

Rest of the EOC is Friday :)

Study for the formula quiz

bit.ly/formulas18

Quiz each other, study yourself

We will start in ~7 minutes

Formula Quiz

- Do your best
- Turn into basket when done, *Pick up graph paper if needed*
- Get laptop from eLab cart (will need it later)
start "coordinate review" on weebly or Classroom
while waiting for others to finish

(Key located by eLab door)

Coordinate Geometry Review: formulas you must know

Equation of a line (point-slope)

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

Equation of a circle

$$(x - h)^2 + (y - k)^2 = r^2$$

Midpoint: $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

$$(3, 5) \quad (-2, -6)$$

Distance formula: $d = \sqrt{(\Delta x)^2 + (\Delta y)^2}$

Slope formula

$$\frac{\Delta y}{\Delta x} \quad \begin{array}{l} \text{rise} \\ \hline \text{run} \end{array}$$

How to write the equation of a line

example EOC question:

Write the equation of a line perpendicular to
 $3x+4y=12$ that passes through $(1,-2)$

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

$$y - (-2) = m(x - 1)$$

Solve for y

$$\begin{array}{r} 3x + 4y = 12 \\ -3x \quad -3x \\ \hline 4y = 12 - 3x \\ y = \frac{12 - 3x}{4} \end{array}$$

$$\begin{array}{r} y = -\frac{3}{4}x + 3 \\ \text{slope} = -\frac{3}{4} \\ \text{slope} = \frac{4}{3} \end{array}$$

$$y + 2 = \frac{4}{3}(x - 1)$$

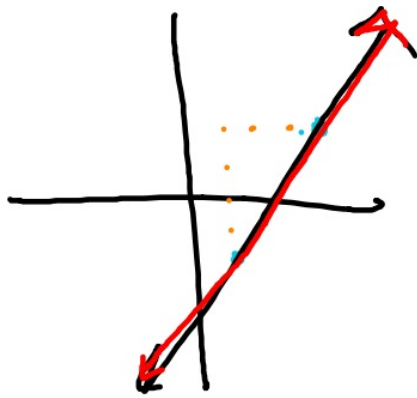
Perp. Slopes
 $\frac{c}{d} \perp -\frac{d}{c}$

$\frac{4}{3} \perp$

How to graph a line on the plane:

Answer from last question:

$$y + 2 = \frac{4}{3}(x - 1)$$



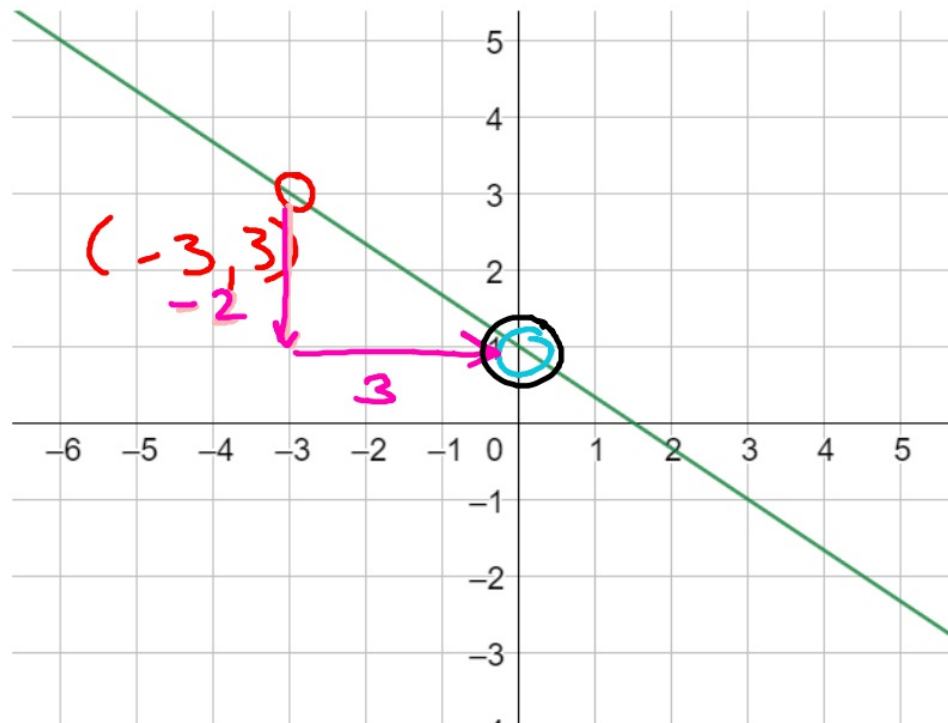
① go to the point.

② Apply the slope

$$\frac{4}{3}$$

↑ ← rise
← run

How to write the equation of a line from a picture.



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

Write the equation of the perpendicular bisector of the segment with endpoints A(-3,2) and B(5,6)

opp. reciprocal slopes
passes thru midpt

① Find midpoint

$$(-3, 2) \quad (5, 6)$$

$$\left(\frac{-3+5}{2}, \frac{2+6}{2} \right) = \left(\frac{2}{2}, \frac{8}{2} \right) \rightarrow \underline{\underline{(1, 4)}}_{x_1, y_1}$$

② Find slope

$$m = \frac{\Delta y}{\Delta x} = \frac{6-2}{5-(-3)} = \frac{4}{8} = \frac{1}{2} \quad \perp \quad -\frac{2}{1} \leftarrow m$$

③ Plug into pt. slope formula

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

$$y - 4 = -2(x - 1)$$

$$y - 4 = -2x + 2$$

$$\boxed{y = -2x + 6}$$

Not an answer choice?
Solve for y
to put
into slope-intercept
form

Coordinate Geometry Review

available on mgeo.weebly.com and Google classroom

Peer Tutoring

- Study formulas
- get circle hw done for retake (5)
- Work on EOC review
 - ⇒ congruence/transformations handout
 - ⇒ Similarity/Trig handout (long sheet)
- ★ NEW ★ ⇒ Coordinate Geo Review
(on classroom/weebly).