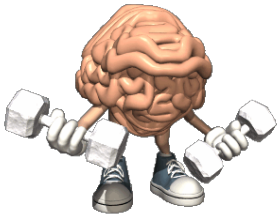
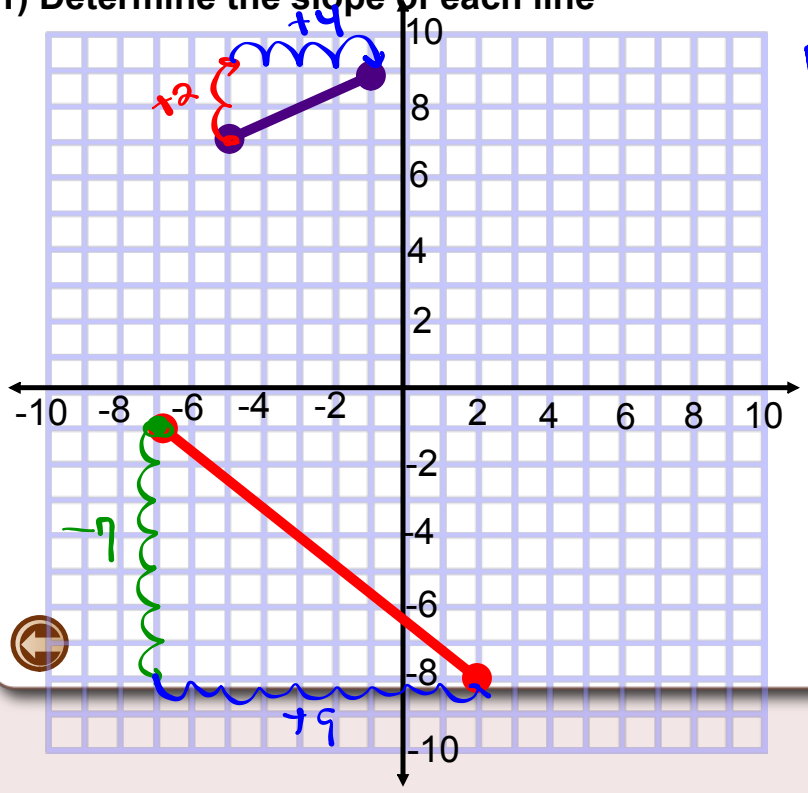
Warm Up



1) Determine the slope of each line



$m = \frac{rise}{run}$

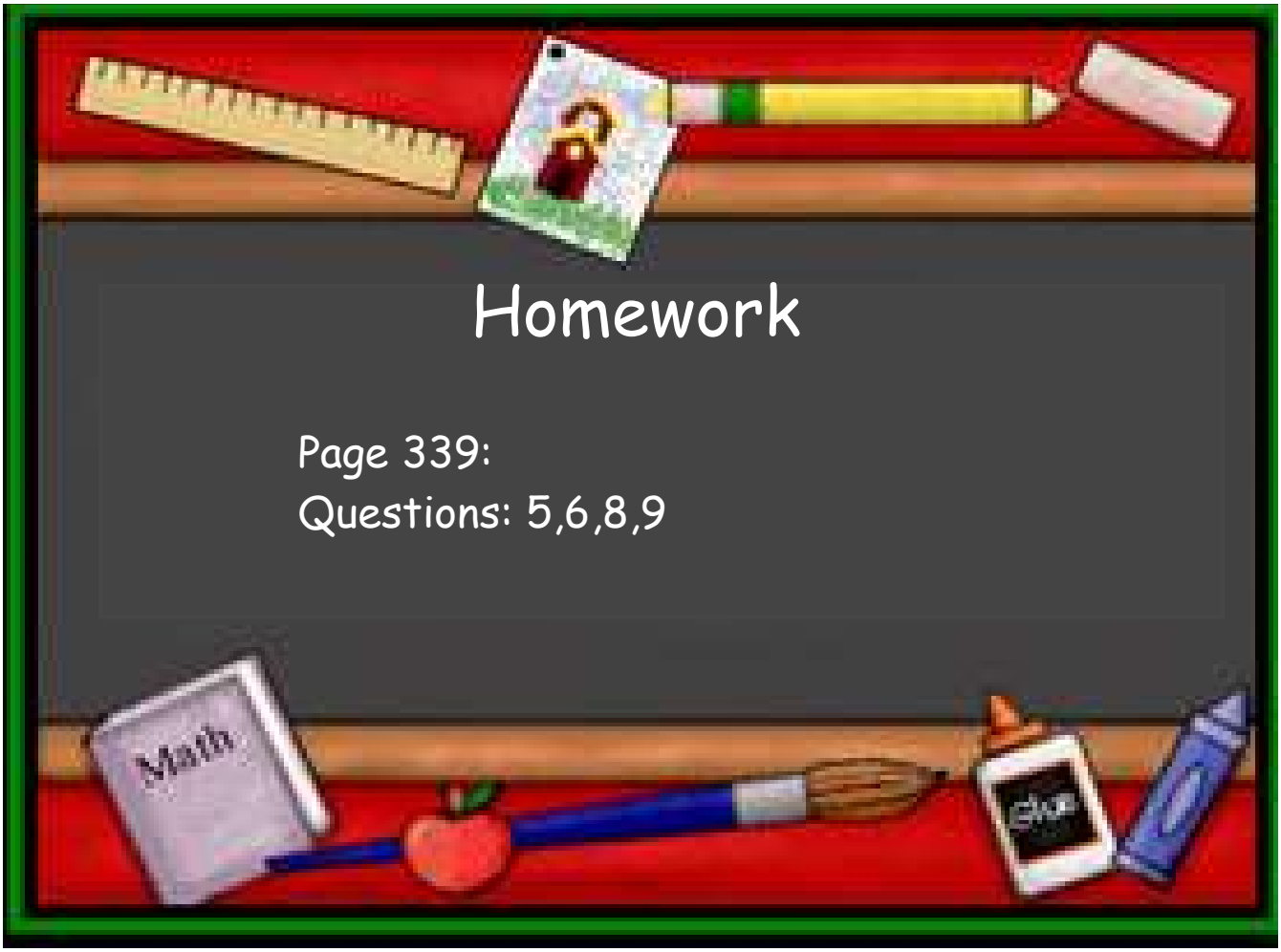
$= \frac{+2}{+4}$ Reduce

$= \frac{1}{2}$

$m = \frac{rise}{run}$

$= \frac{-7}{+9}$

$= -\frac{7}{9}$


Homework
Page 339:
Questions: 5,6,8,9
Math

Calculate the slope. (x, y)

1st point 2nd point

$x_1\ y_1$ $x_2\ y_2$

1. (3,5) (2,8)

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

$= \frac{8-5}{2-3}$

$= \frac{3}{-1}$

$= -3$

$x_1\ y_1$ $x_2\ y_2$

2. (-9,-2) (7,3)

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

$= \frac{3--2}{7--9}$

$= \frac{3++2}{7++9}$

$= \frac{5}{16}$

Be careful integer Rule (add the OPP)

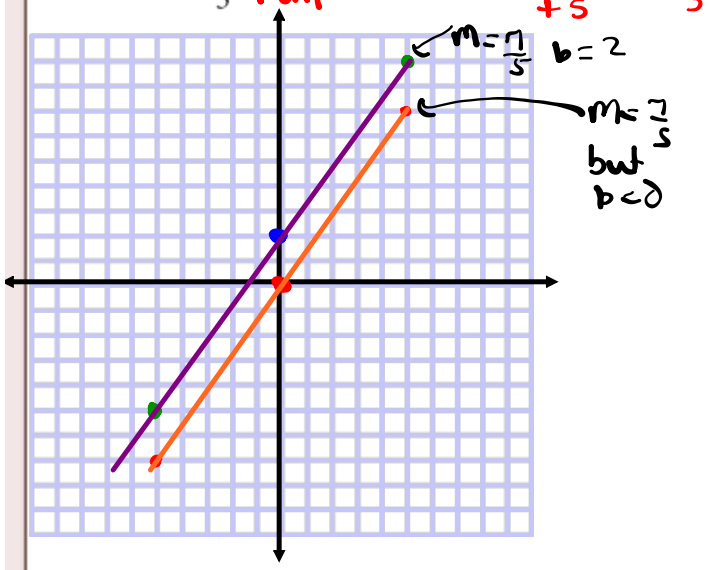
Example 2 Drawing a Line Segment with a Given Slope

Draw a line segment with each given slope.

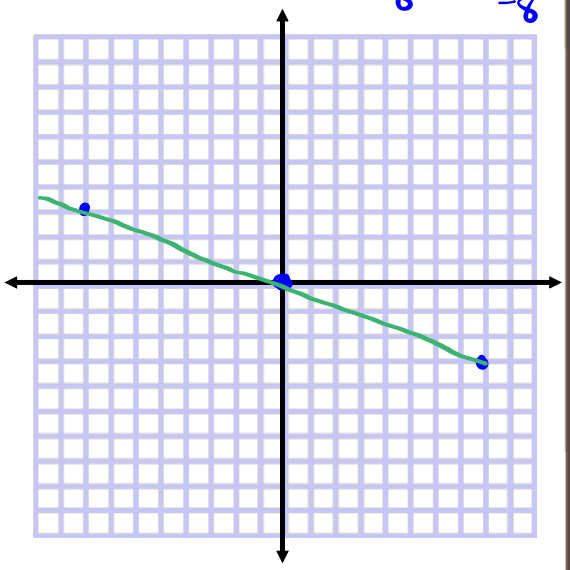
a) $\frac{7}{5}$ rise / run

y-intercept = 2

$\frac{+7}{+5}$ or $\frac{-7}{-5}$

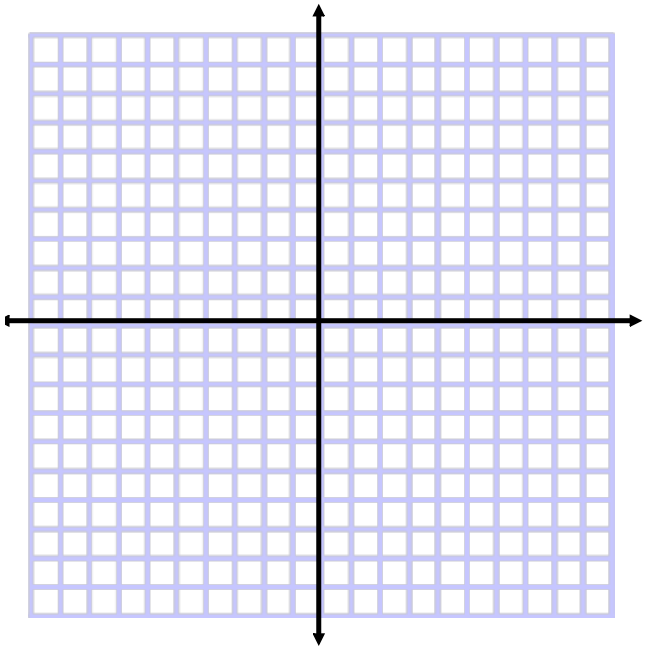


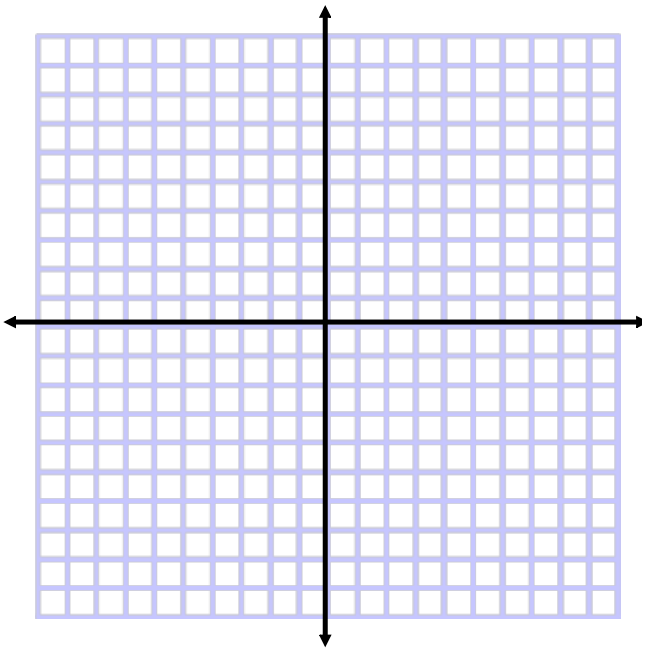
b) $-\frac{3}{8}$ $\frac{-3}{8}$ or $\frac{3}{-8}$



2. Draw a line segment with each slope.

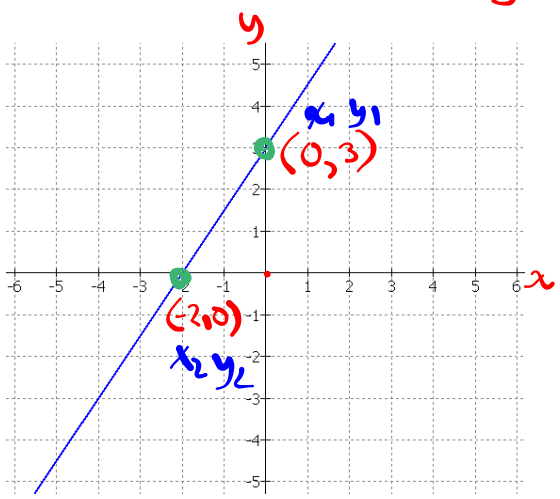
a) $\frac{4}{9}$ b) $-\frac{8}{3}$



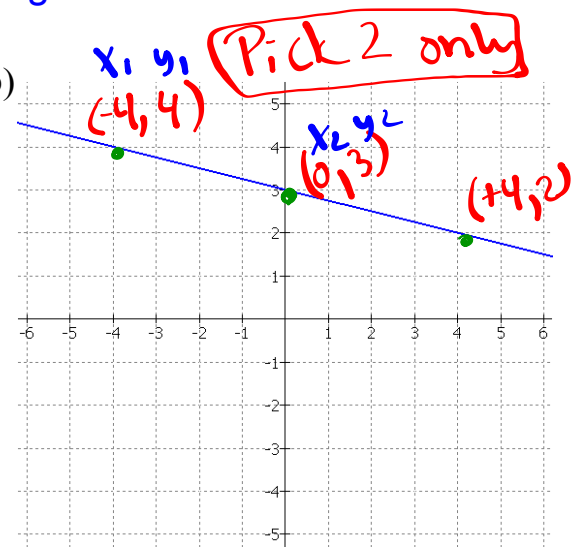


Determine the slope of each of the following lines:

(a)



(b)



Which ordered pairs should we use to make our calculation?

$slope = \frac{\Delta y}{\Delta x}$

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

Slope = $\frac{\Delta y}{\Delta x}$

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

$m = \frac{0 - 3}{-2 - 0}$

$= \frac{-3}{-2}$

$m = \frac{3}{2}$

Read off graph $b = +3$

$y = mx + b$

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

$slope = \frac{\Delta y}{\Delta x}$

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

Be Careful

$m = \frac{3 - 4}{0 - -4}$

$m = \frac{3 - 4}{0 + +4}$

$m = \frac{-1}{4}$

Read off graph $b = +3$

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

$y = mx + b$

m: slope

b: y-intercept

$m = \frac{rise}{run}$

Given Slope find rise or run

$m = \frac{y_2 - y_1}{x_2 - x_1}$ ← use when given point on a graph

1) If m = -3 and the run = 5, what would the rise equal to?

$m = \frac{rise}{run}$ Fill in what is given

$-3 = \frac{rise}{5}$

Rearrange and solve for rise.

$5 \times -3 = \frac{rise}{5} \times 5$

$-15 = rise$

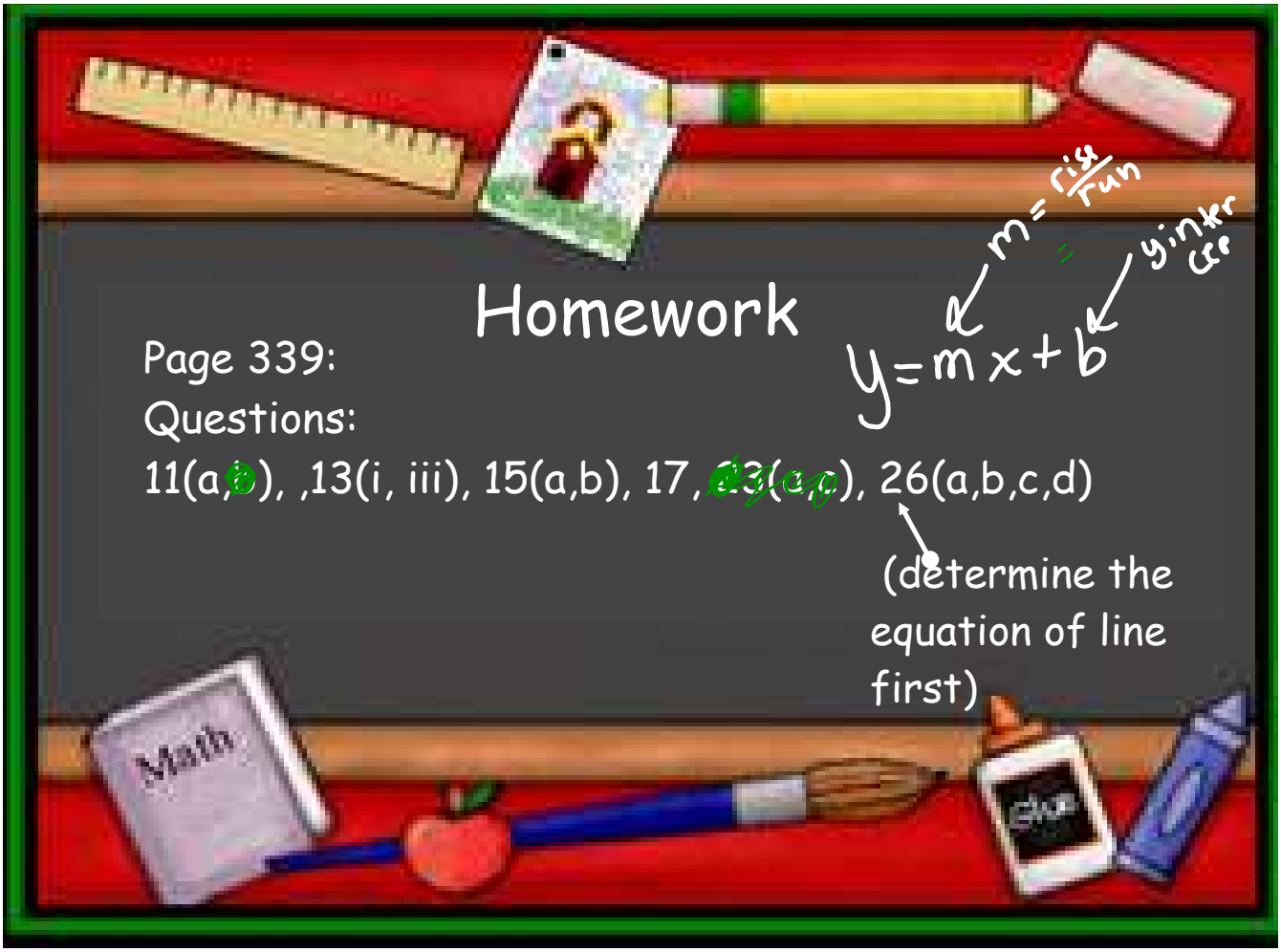
2) If m = 8 and the rise= 24, what would the run equal to?

$m = \frac{rise}{run}$

$run \times 8 = \frac{24}{run} \times run$

$\frac{8 \times run}{8} = \frac{24}{8}$

$run = 3$


Homework
m = rise/run
y-intercept
y = m x + b
Page 339:
Questions:
11(a,b), ,13(i, iii), 15(a,b), 17, 23(a,b), 26(a,b,c,d)
(determine the equation of line first)
Math