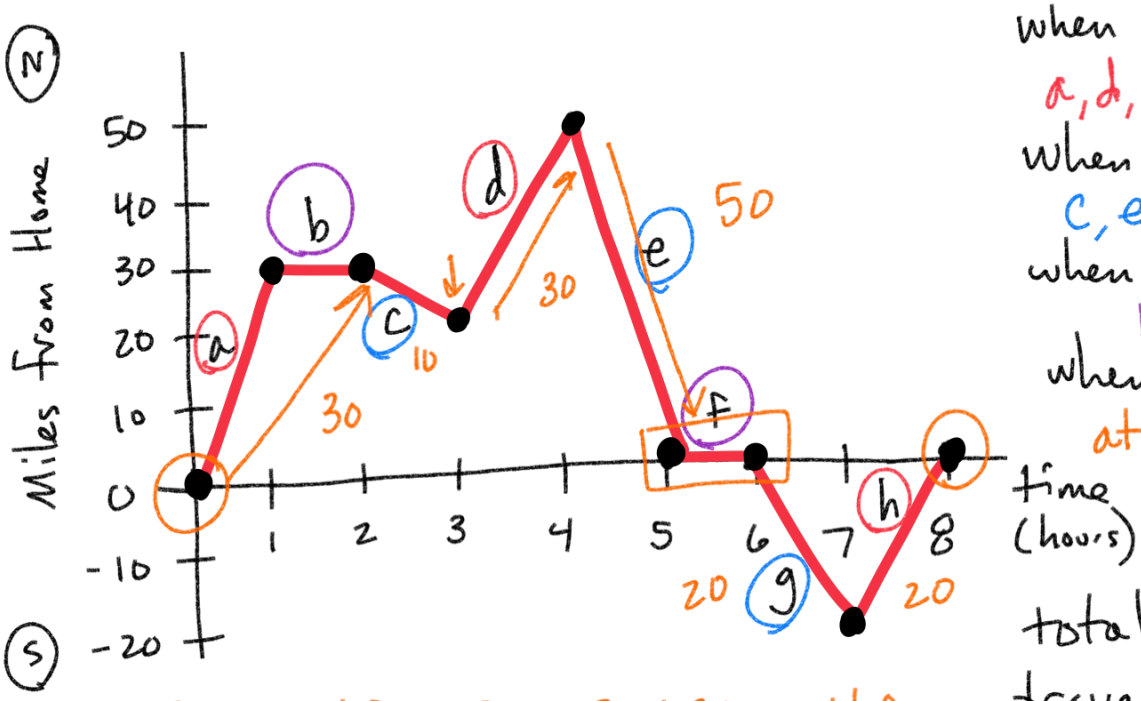
W-A1 Algebra 1 Week 25 3/20



when increasing?
a, d, h

when decreasing?
c, e, g

when constant?
b, f

when home?
at 0, 5–6, 8
f

total distance traveled? $\boxed{160 \text{ mi}}$

$30 + 10 + 30 + 50 + 20 + 20 = 160$

Which of the following is a function?
If so, state the domain and range.

Every input has one, and only one, output

a) (1,2), (2,4), (3,6), (4,8) function

Domain {1, 2, 3, 4} range: {2, 4, 6, 8}
x's y's

b) (0,-3), (1,-3), (2,-3), (3,-3) yaw! function

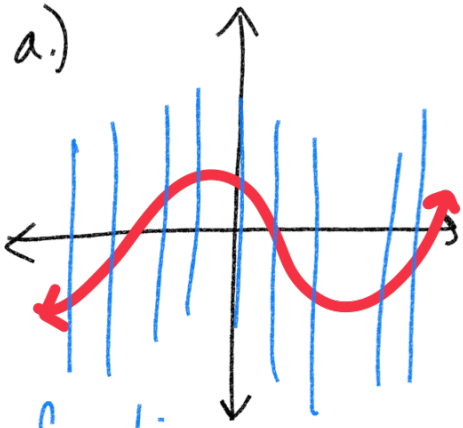
Domain {0, 1, 2, 3}
Range {-3}

c) (-1,2), (-2,6), (1,-2), (2,-6) yaw! function

Domain {-1, -2, 1, 2}
Range {2, 6, -2, -6}

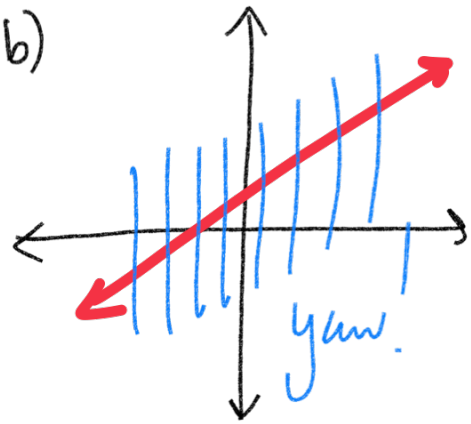
d) (0,4), (1,3), (1,5), (2,8) Naw!

a.)



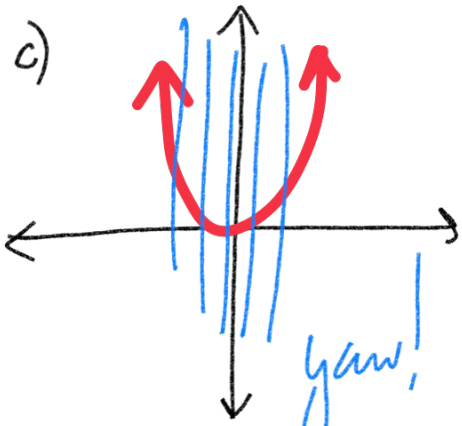
function

b)



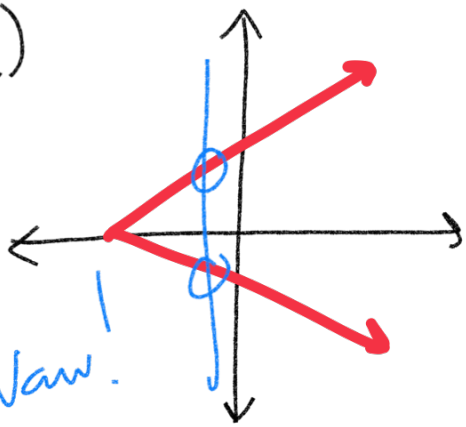
yaw.

c)



yaw!

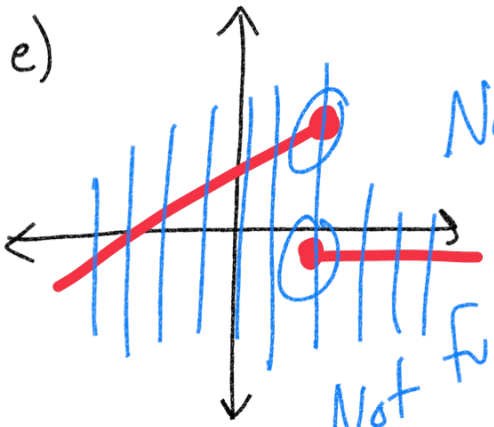
d)



Not function.

Naw.

e)



Naw!

Not function

$$y = 2x + 3$$

slope

y-int

input → output

input (x) → 5

output (y) → 13

$x = 5$

$y = 2(5) + 3$

$10 + 3$

$y = 13$

input (x) → 8

output (y) → 19

$y = 2x + 3$

$2(8) + 3$

$16 + 3$

$y = 19$

input → −3

output → −3

$y = 2x + 3$

$2(-3) + 3$

$-6 + 3$

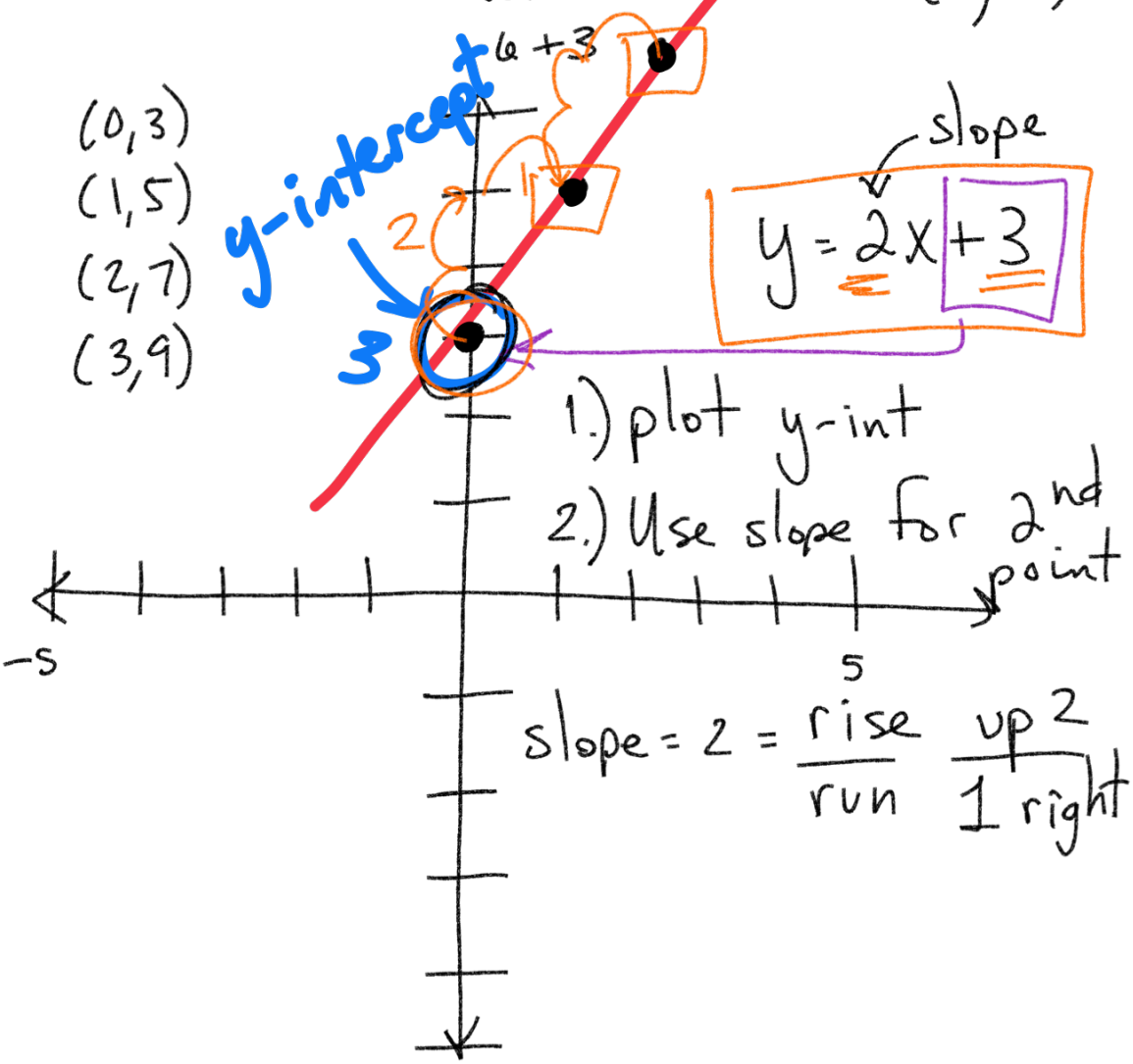
$y = -3$

x	2x + 3	y	(x, y)
0	2(0) + 3	3	(0, 3)
1	2(1) + 3 2 + 3	5	(1, 5)
2	2(2) + 3 4 + 3	7	(2, 7)
3	2(3) + 3 6 + 3	9	(3, 9)

1 1 1

2 2 2

(0, 3)
(1, 5)
(2, 7)
(3, 9)



slope

$y = 2x + 3$

1.) plot y-int

2.) Use slope for 2nd point

slope = 2 = $\frac{\text{rise}}{\text{run}}$ $\frac{\text{up } 2}{1 \text{ right}}$

Linear form Slope-Intercept

$y = mx + b$

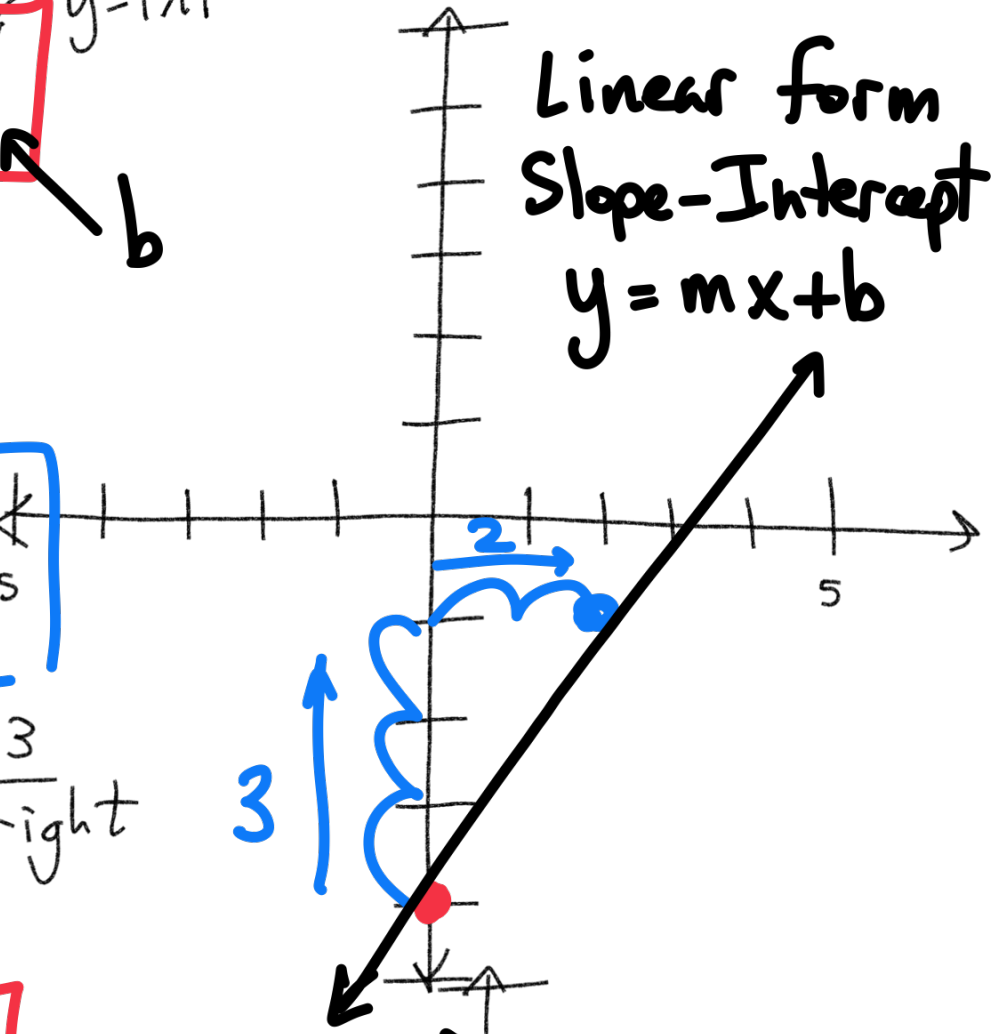
$$y = \boxed{\frac{3}{2}}x \boxed{-4}$$

slope (m) y-int (b)

1.) Plot y-int

2.) Use slope to find 2nd point

slope $= \frac{3}{2} = \frac{\text{up } 3}{2 \text{ right}}$



$$y = \boxed{-3}x \boxed{+4}$$

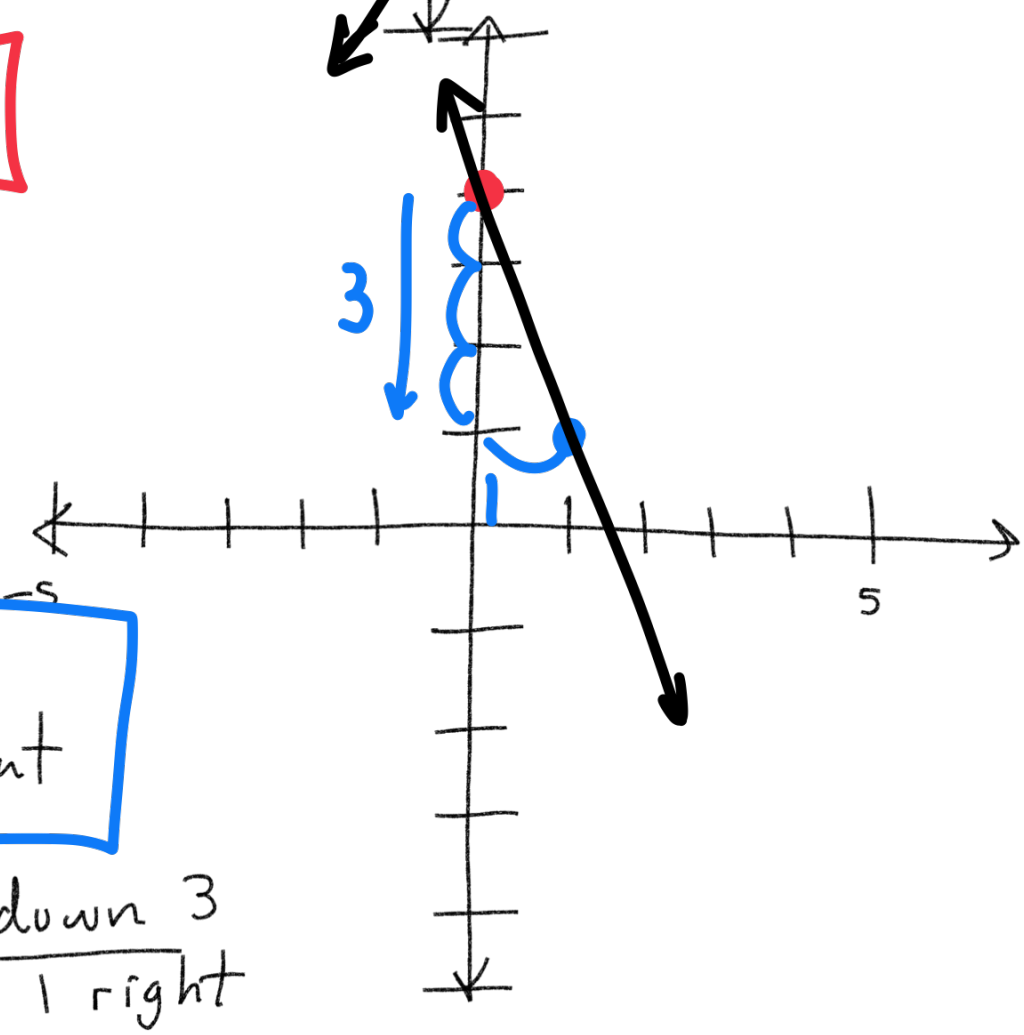
down

$y = mx + b$

1.) Plot y-int

2.) Use slope to find 2nd point

slope $= \frac{-3}{1}$ $\frac{\text{down } 3}{1 \text{ right}}$



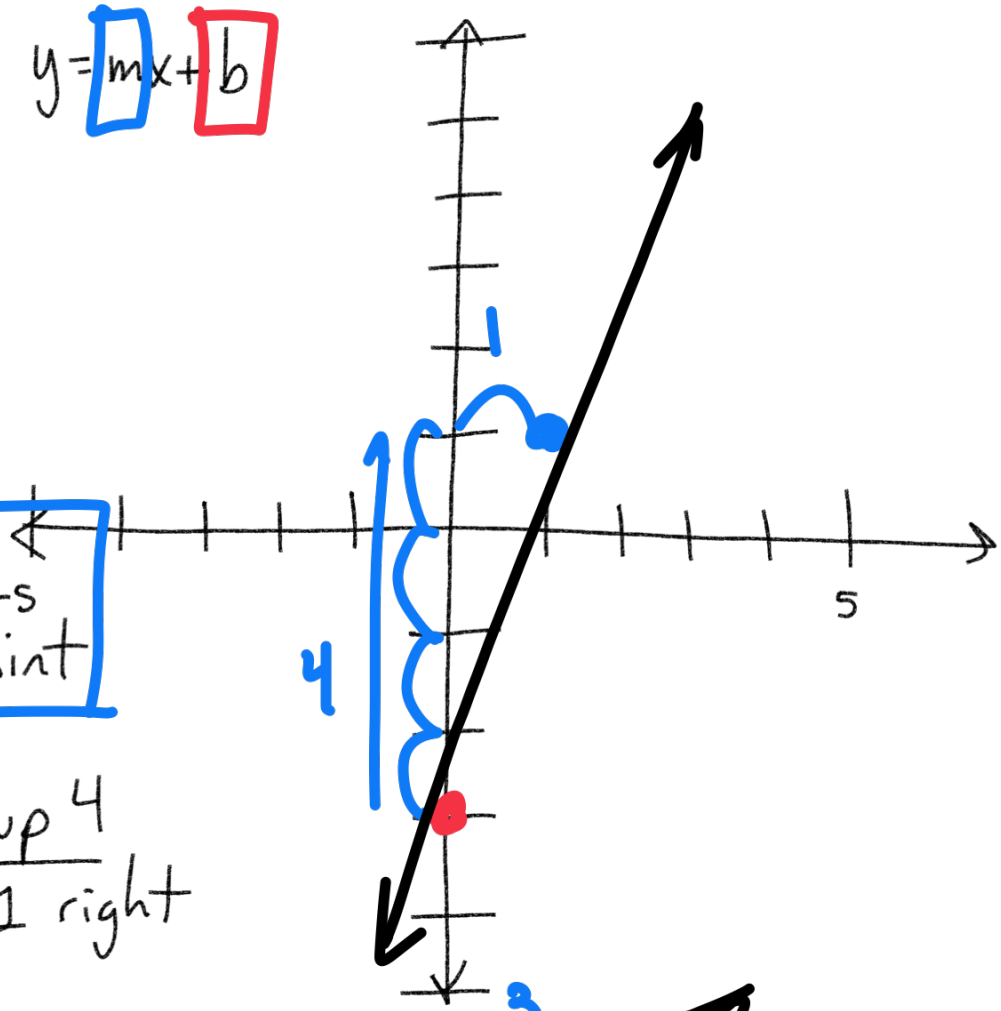
1.) $y = \boxed{4}x \boxed{-3}$ $y = \boxed{m}x + \boxed{b}$

1.) Plot y-int

$b = -3$

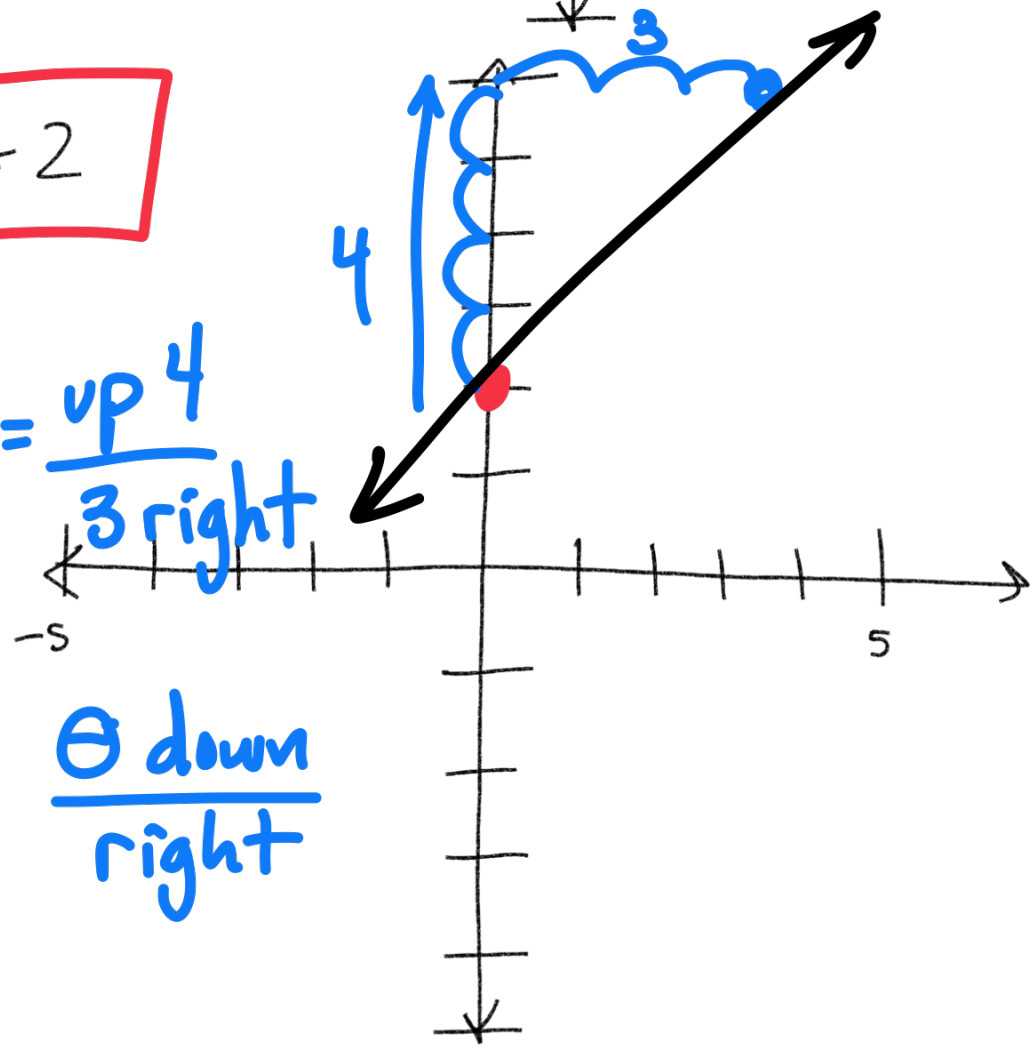
2.) Use slope to find next point

slope $= m = 4 = \dfrac{\text{up } 4}{1 \text{ right}}$



$y = \boxed{\dfrac{4}{3}}x \boxed{+2}$

slope: $\dfrac{4}{3} = \dfrac{\text{up } 4}{3 \text{ right}}$



$\dfrac{\oplus \text{ up}}{\text{right}}$ $\dfrac{\ominus \text{ down}}{\text{right}}$

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

$$\text{slope} = \frac{-2}{3} = \frac{\text{down } 2}{3 \text{ right}}$$