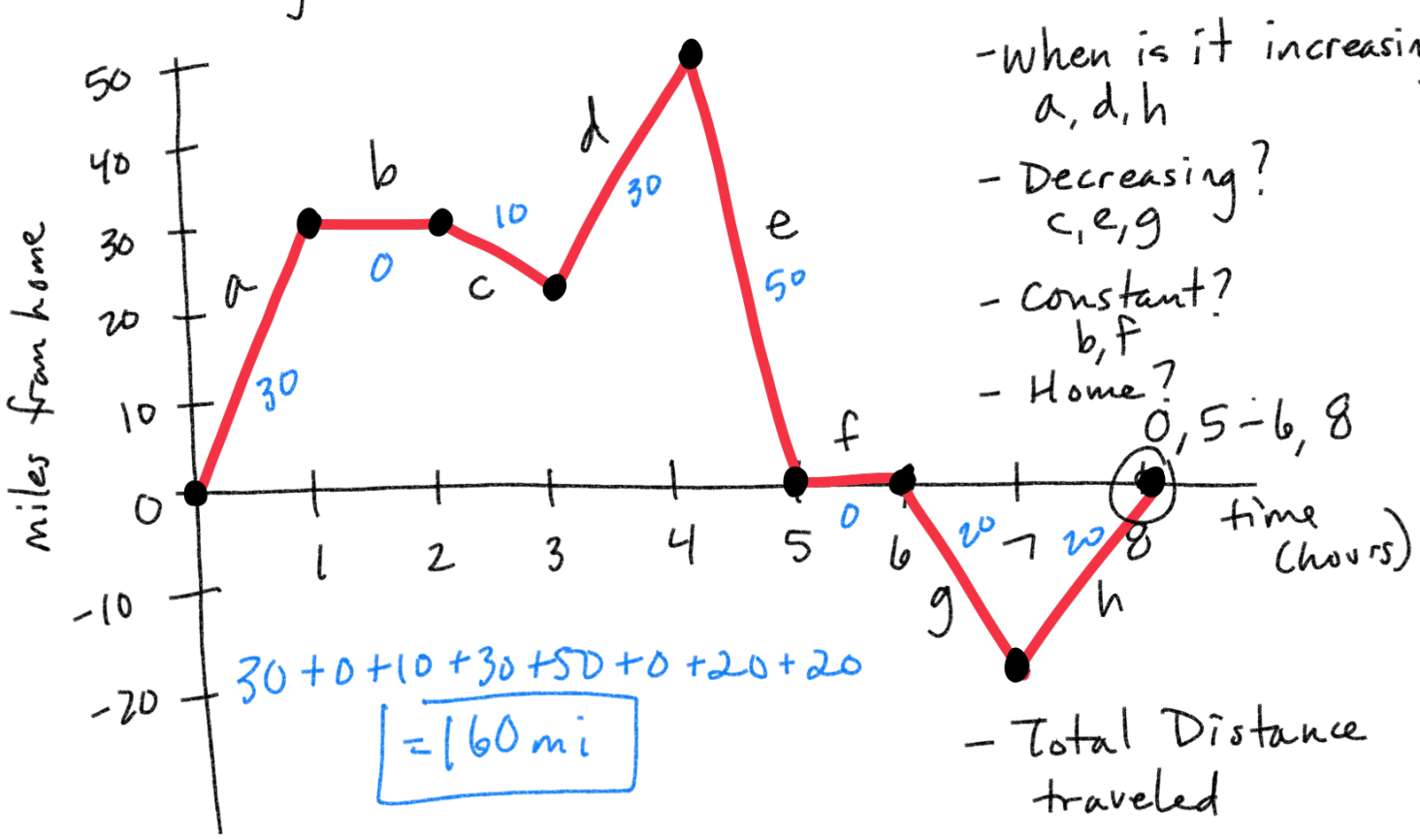
M-A1 Algebra 1 Week 25 3/27



- When is it increasing?
  a, d, h
- Decreasing?
  c, e, g
- constant?
  b, f
- Home?
  0, 5 - 6, 8
- Total Distance traveled

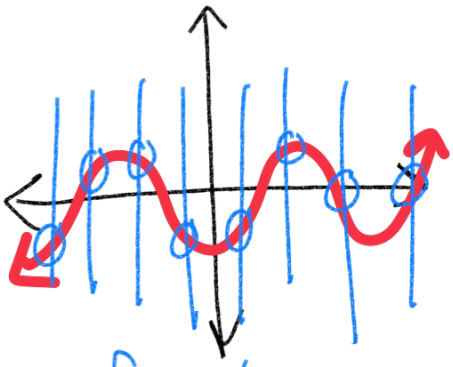
Which of the following is a function? If a function, state the domain and range.

a) (1, 2), (2, 4), (3, 6), (4, 8) function
Domain: {1, 2, 3, 4}
Range: {2, 4, 6, 8}

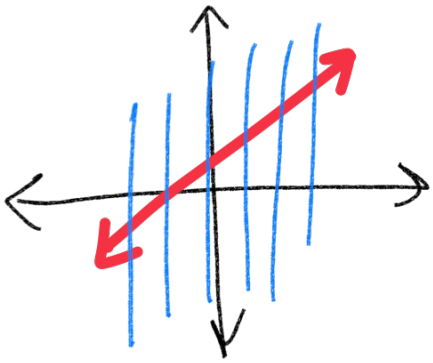
b) (0, -3), (1, -3), (2, -3), (3, -3) function
Domain: {0, 1, 2, 3}
Range: {-3}

c) (-1, 2), (-2, 6), (1, -2), (2, -6) function
Domain: {-1, -2, 1, 2}
Range: {2, 6, -2, -6}

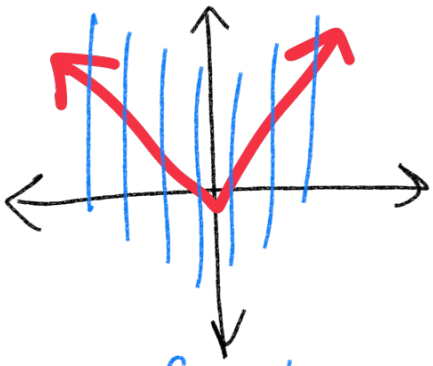
d) (0, 4), (1, 3), (1, 5), (2, 8) not a function



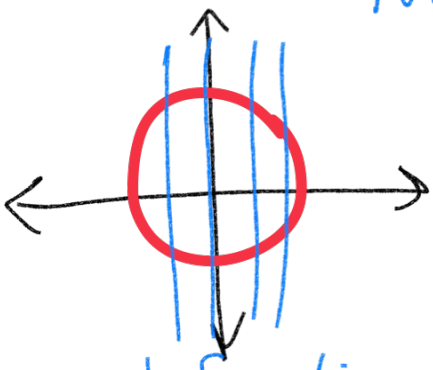
function



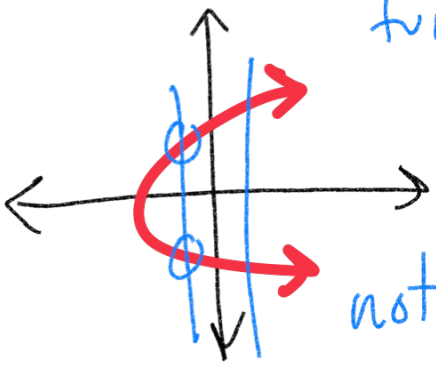
function



function



not function



not function

Salary Used Car Salesperson

(in hundreds of dollars)

$y = 2x + 3$

x = # of cars sold

$2(5) + 3$

$10 + 3$

13

$x = 8$

$y = 2x + 3$

$y = 2(8) + 3$

$16 + 3$

$\boxed{19}$

$x = -3$

$y = 2(-3) + 3$

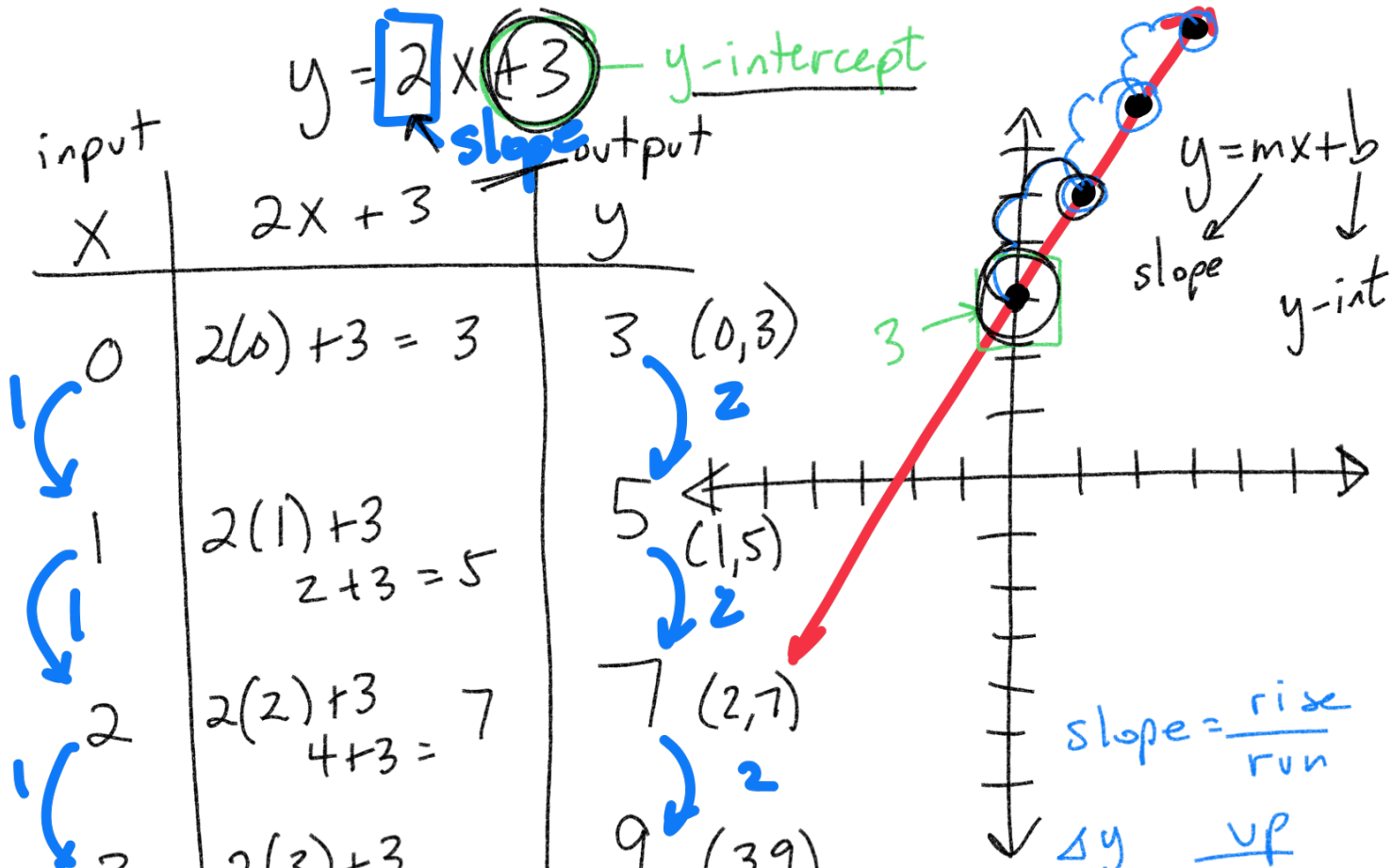
$-6 + 3$

$\boxed{-3}$

input x	$2x + 3$	output y
0	$2(0) + 3 = 3$	3
1	$2(1) + 3$ $2 + 3 = 5$	5
2	$2(2) + 3$ $4 + 3 = 7$	7
3	$2(3) + 3$ $6 + 3 = 9$	9

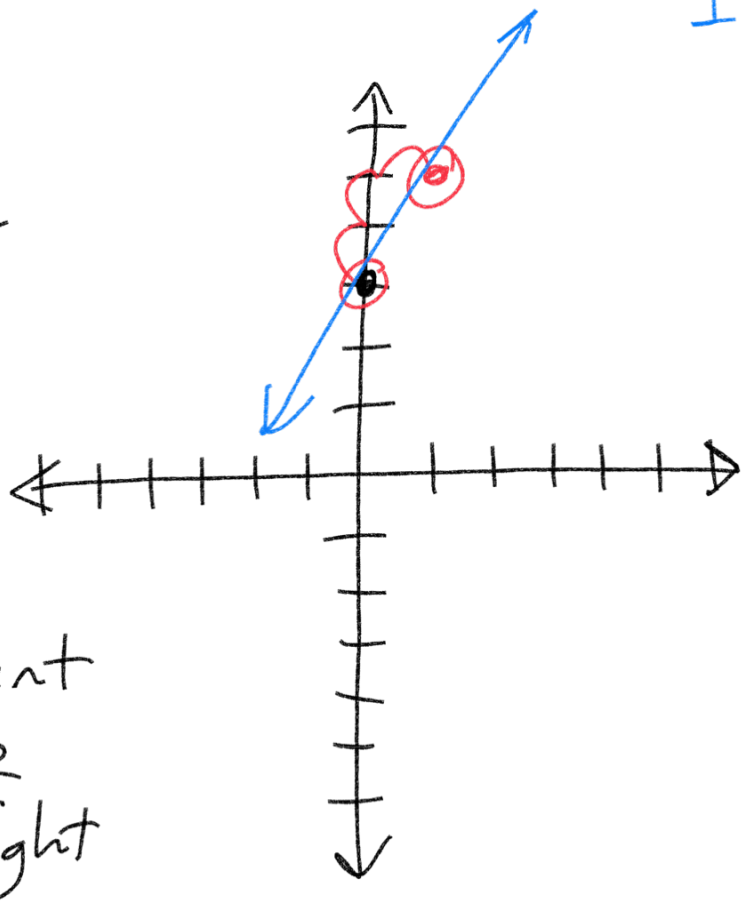
$y = 2x + 3$ — slope: 2; y-intercept: 3

input x	$2x + 3$	output y	
0	$2(0) + 3 = 3$	3	(0, 3)
1	$2(1) + 3$ $2 + 3 = 5$	5	(1, 5)
2	$2(2) + 3$ $4 + 3 = 7$	7	(2, 7)
3	$2(3) + 3$ $6 + 3 = 9$	9	(3, 9)



$y = 2x + 3$

slope — y-int



1.) Plot y-int

2.) Use slope to find 2nd point

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

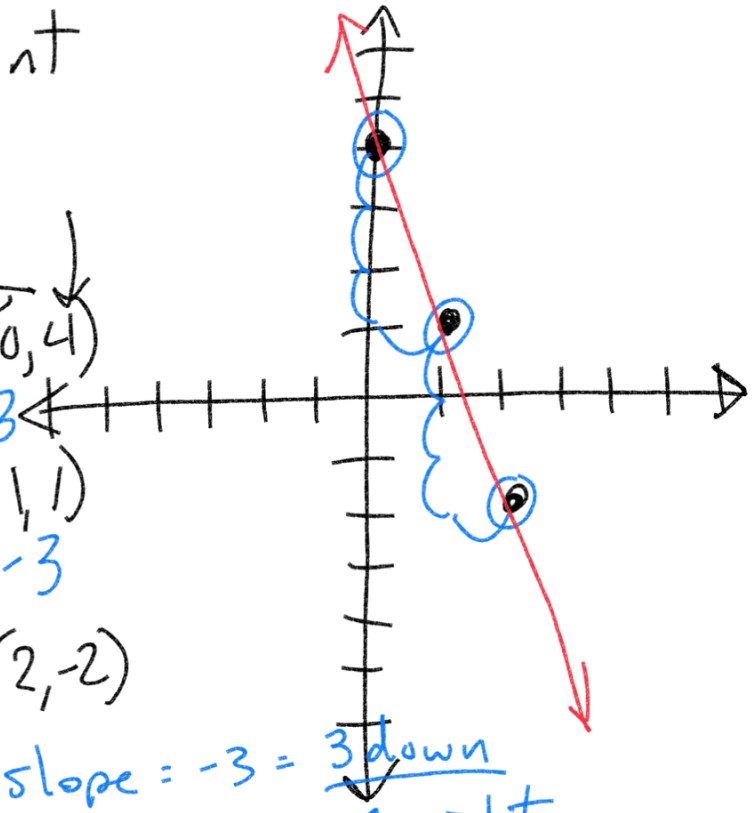
$y = -3x + 4$ ← y-int

slope

x	$-3x+4$	y
0	$-3(0)+4 = 4$	4 → (0, 4)
1	$-3(1)+4$ $-3+4 = 1$	1 → (1, 1)
2	$-3(2)+4$ $-6+4 = -2$	−2 → (2, −2)

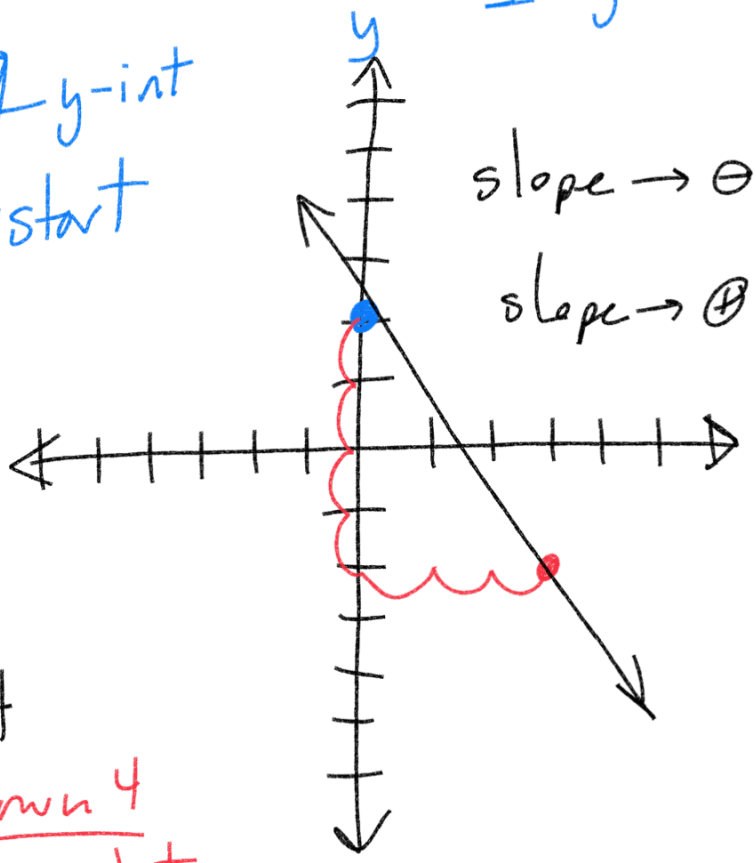
-3

-3



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

$y = \frac{-4}{3}x + 2$ ← y-int, start



slope → ⊖ → down

slope → ⊕ → up

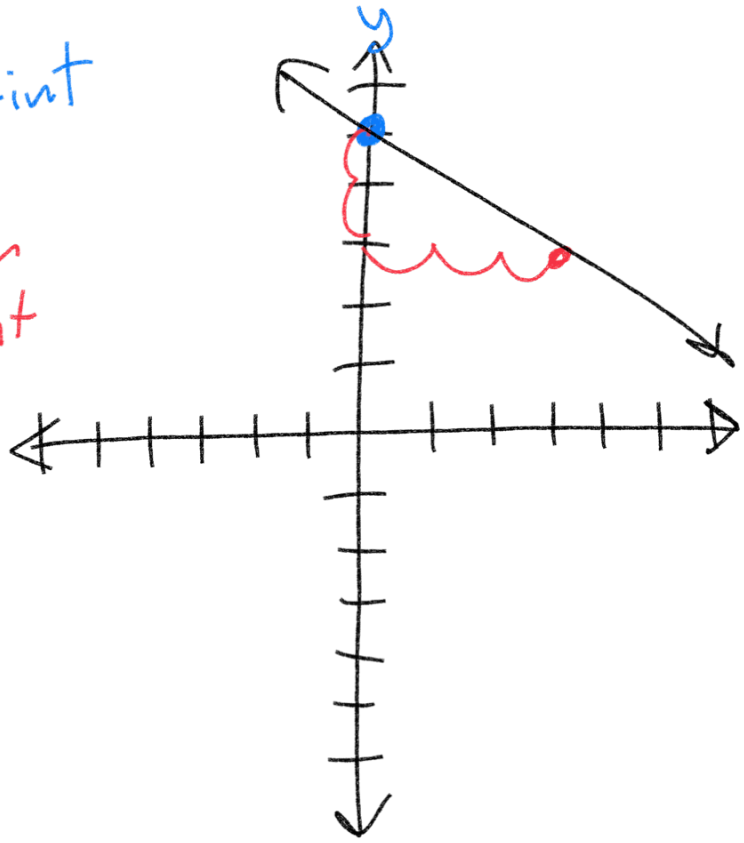
1.) Plot y-int

2.) Use slope to find 2nd point

slope: $\frac{-4}{3} = \frac{\text{down } 4}{3 \text{ right}}$

1.) $y = \frac{-2}{3}x + 5$ — y-int

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



2.) $y = 4x - 3$ — y-int

slope $= 4 = \frac{\text{up } 4}{1 \text{ right}}$