

$$y = mx + b$$

↓
Slope
↑
y-intercept

$$y = 5x - 3$$

$$m = 5$$

Earn \$5 per km

$$b = -3$$

Spent \$3 on a shirt

$$y = -x + 6$$

$$m = -1$$

lose \$ per km

$$b = 6$$

make \$6

$$y = 2$$

Earn \$2 no matter how far they walk.

$$y = 5x - 3$$

x	-2	-1	0	1	2
y	-13	-8	-3	2	7

$$5(-2) - 3 = -13$$

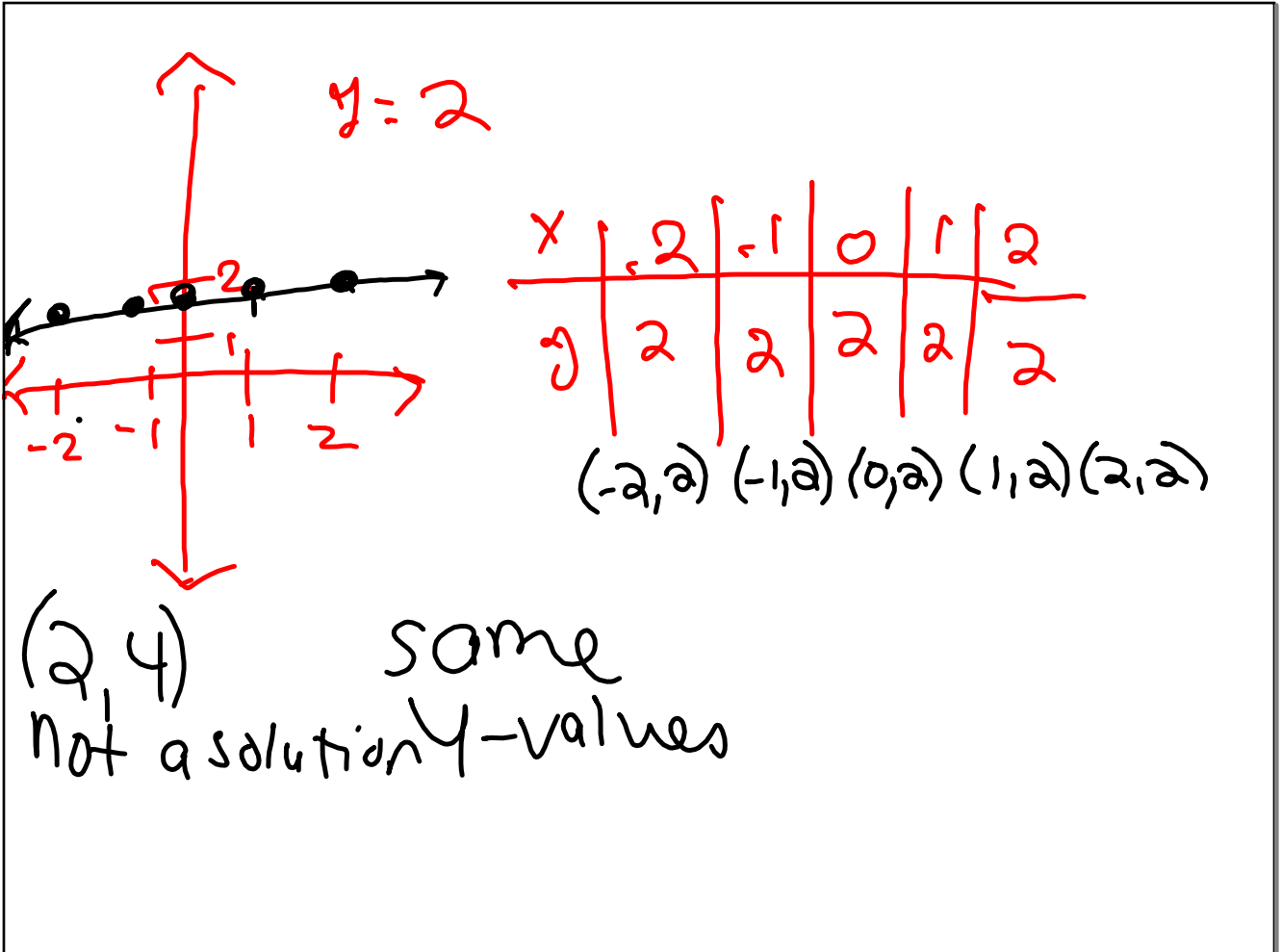
$$y = -x + 6$$

x	-2	-1	0	1	2
y	8	7	6	5	4

$$-1(-2) + 6 = 2 + 6 = 8$$

$$y = 2$$

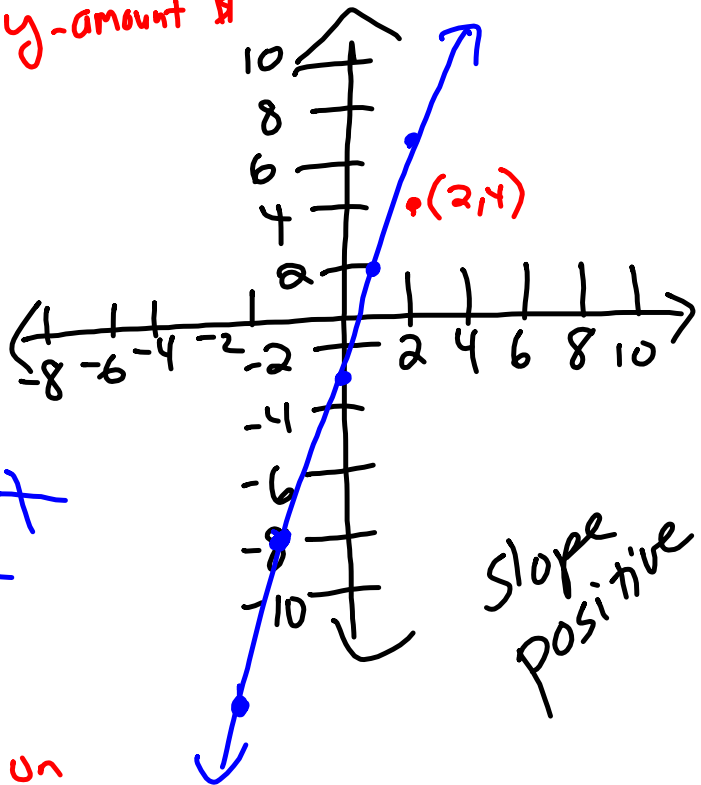
x	-2	-1	0	1	2
y	2	2	2	2	2



$$y = 5x - 3$$

X-distance
y-amount \$

X	-2	-1	0	1	2
y	-13	-8	-3	2	7



y-values-increasing

X-independent

y-dependent

Value for
y depends on
what x is.

slope
positive

$$y = -x + 6$$

$$-1(2) + 6$$

$$-2 + 6 = 4$$

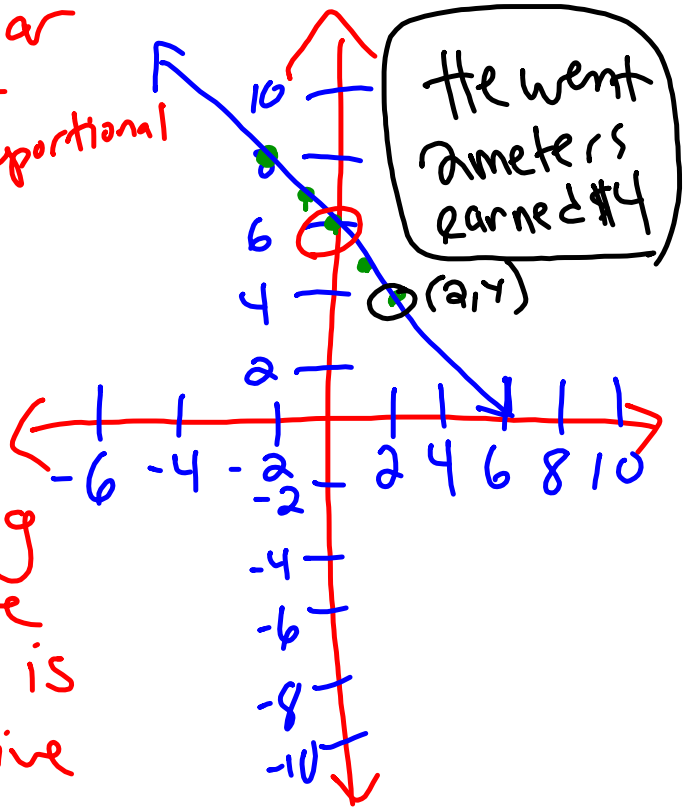
linear
not
proportional

x	-2	-1	0	1	2
y	8	7	6	5	4

$$m = -1$$

$$b = 6$$

decreasing
because
slope is
negative



$$(2, 4)$$
$$y = 5x - 3 \quad | \quad y = -x + 6 \quad | \quad y = 2$$

Table	Equation	graph										
<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>4</td> </tr> <tr> <td>4</td> <td>8</td> </tr> <tr> <td>6</td> <td>12</td> </tr> <tr> <td>8</td> <td>16</td> </tr> </tbody> </table> <p>look for 4 solution is 8</p>	x	y	2	4	4	8	6	12	8	16	<p>Input "x" (4) to get "y" \rightarrow 8</p> <p>x-independent y-dependent</p>	<p>(4, 8)</p> <p>Solution to equation</p> <p>Walked 4 meters for \$8</p>
x	y											
2	4											
4	8											
6	12											
8	16											