

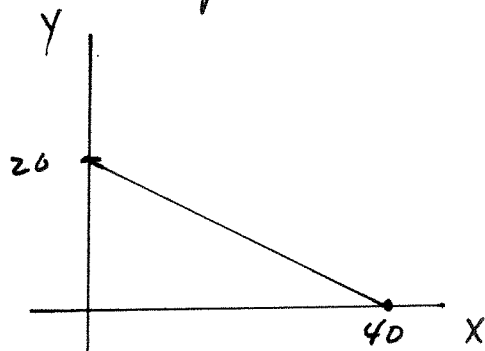
1.2
#20

(a)

let x = the number of three-speed bikes produced ✓
 y = the number of ten-speed bikes produced

Since 240 hrs of labor are available and it takes six hours to produce a three-speed bike and twelve hours to produce a ten-speed bike we must choose x and y to satisfy

$$6x + 12y = 240. \quad \checkmark$$



(b) Since

$$6x + 12y = 240$$

$$y = -\frac{1}{2}x + 20$$

So, the slope of the line shown is $-\frac{1}{2}$. ✓

✓ $-\frac{1}{2}$ as slope implies that for every additional two three-speed bikes we produce we must produce one less ten-speed bike.

1.2
#26

let l = the length of an adult whale (ft) ✓
 w = the weight of an adult whale (tons)

$$w \approx 3.51l - 192$$

A slope of 3.51 implies that for each foot of increased length the weight increases by 3.51 tons.

So, five additional feet of length would produce a weight increase of 17.55 tons. ✓

