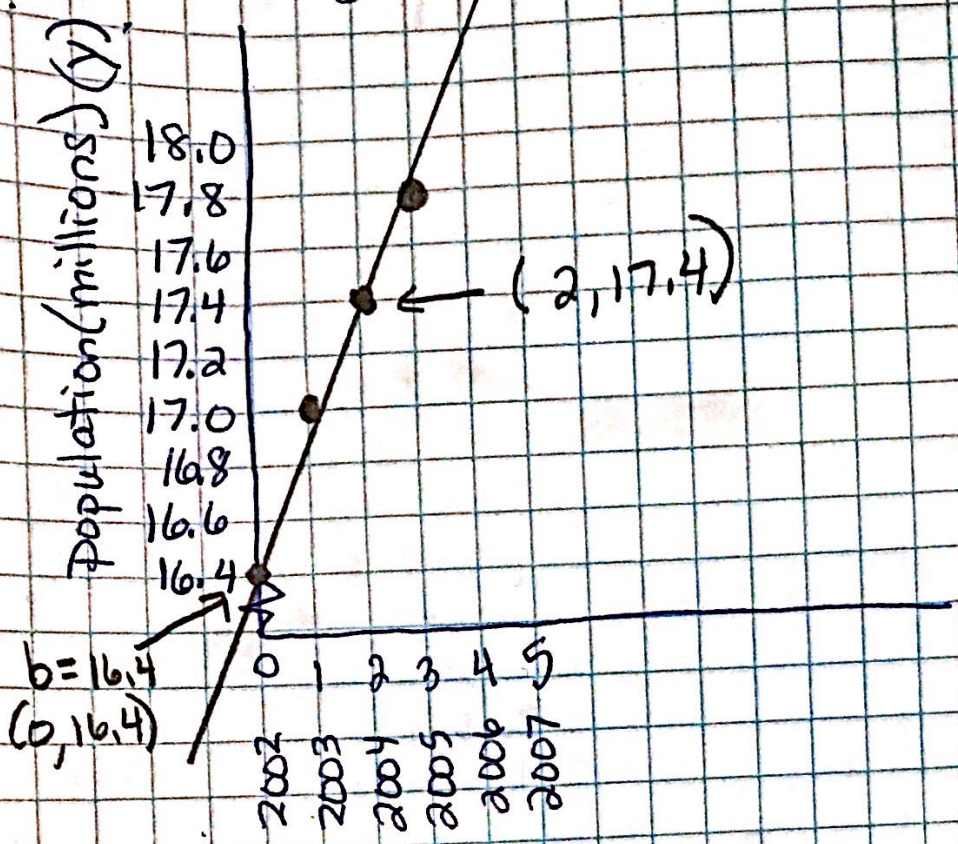
Pg. 30 #3



a) $b = 16.4$ $\quad m = \frac{1}{2}$ $\quad$ correlation coefficient ≈

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

$$\frac{17.4 - 16.4}{2 - 0} = \frac{1}{2}$$

$$y = \frac{1}{2}x + 16.4$$

b) 2020? $x = 18$ $\longrightarrow$ $y = \frac{1}{2}(18) + 16.4$

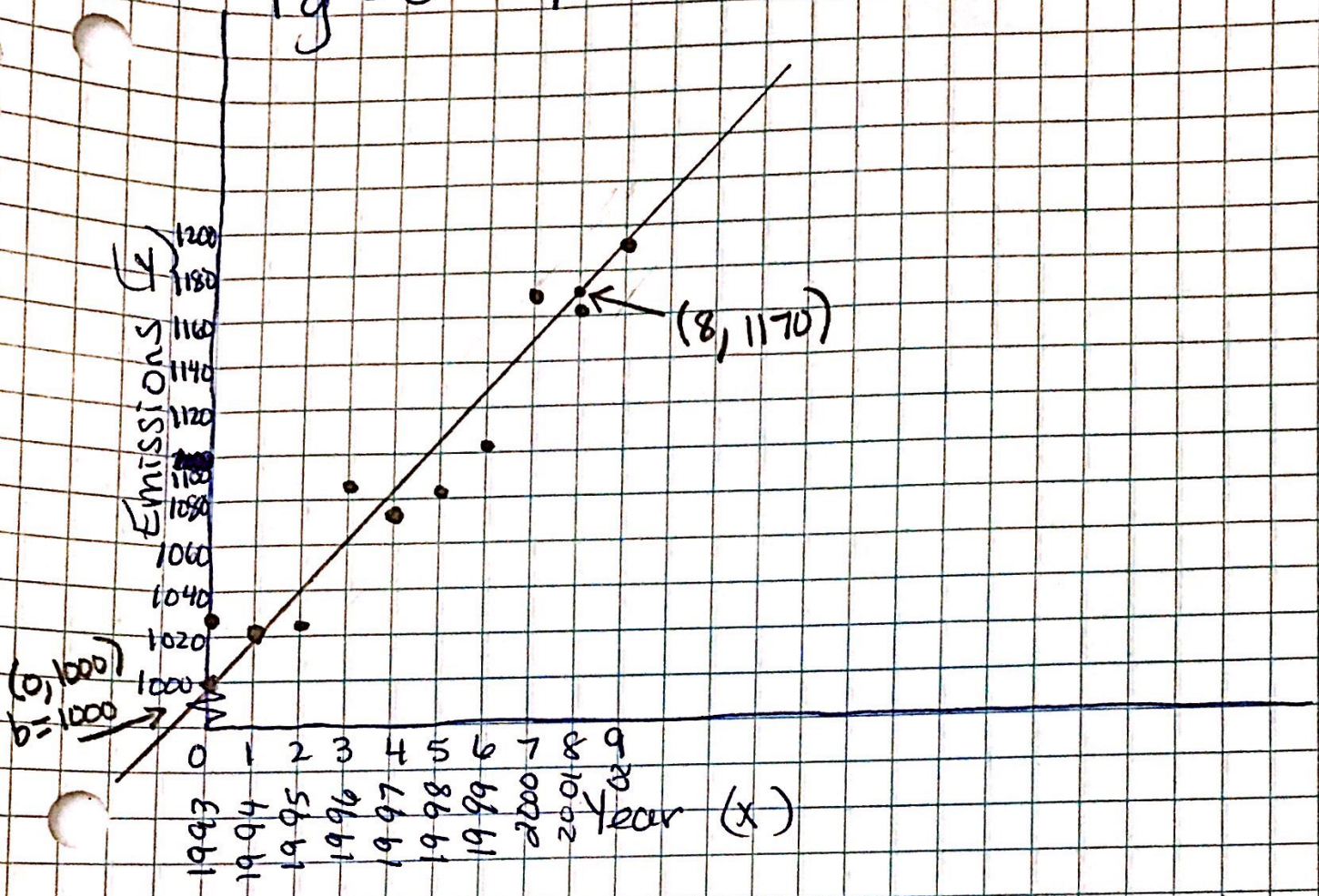
(extrapolation)

$y = 9 + 16.4$

$y = 25.4$

In 2020, the population would be about 25.4 million.

Pg 30 #4



a) $b = 1000$ $m =$ correlation coefficient $\approx$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{1170 - 1000}{8 - 0} = \frac{170}{8} = 21.25$$

$$y = 21.25x + 1000$$

b) 1990? $x = -3$ $\longrightarrow$ $y = 21.25(-3) + 1000$ $y = 936.25$

2010? $x = 17$ $\longrightarrow$ $y = 21.25(17) + 1000$ $y = 1361.25$

In 1990, about 936 residential tons were emitted.

In 2010, about 1,361 residential tons were emitted.