

1. Suppose that the population of turtles on an island is given by

$$P = 15t + 22$$

where P is the number of turtles and t is the number of years since 1960.

Note: I took $t = 0$ to be the first day of 1960 (to follow the way the book does it), but it is perfectly OK to assume that $t = 0$ is the last day of 1960, in which case all the t - values below should be increased by one. I accepted either way of looking at it, as long as you were consistent.

- (a) How many turtles were on the island in 1960?

$$\text{When } t = 0, P = 15(0) + 22 = 22$$

- (b) How many were there in 2000?

$$\text{When } t = 40, P = 15(40) + 22 = 622$$

- (c) In what year were there 200 turtles on the island?

$$15t + 22 = 200$$

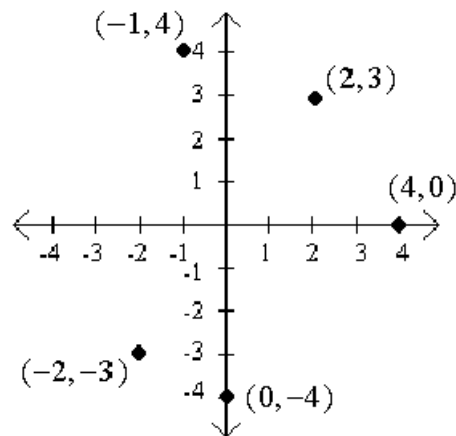
$$15t = 178$$

$$t = 11.87$$

This is near the end of 1971.

2. Plot the points given on the axes below:

$$(2, 3), (-1, 4), (-2, -3), (4, 0), (0, -4)$$



Extra Credit 1: Solve $\frac{2x}{3} = 1 + \frac{x}{2}$.

$$\frac{2x}{3} = 1 + \frac{x}{2}$$

$$4x = 6 + 3x$$

$$x = 6$$

Extra Credit 2: Solve $3w + 4 = \frac{1}{y}$ for y in terms of w .

$$3w + 4 = \frac{1}{y}$$

$$3wy + 4y = 1$$

$$y(3w + 4) = 1$$

$$y = \frac{1}{3w + 4}$$