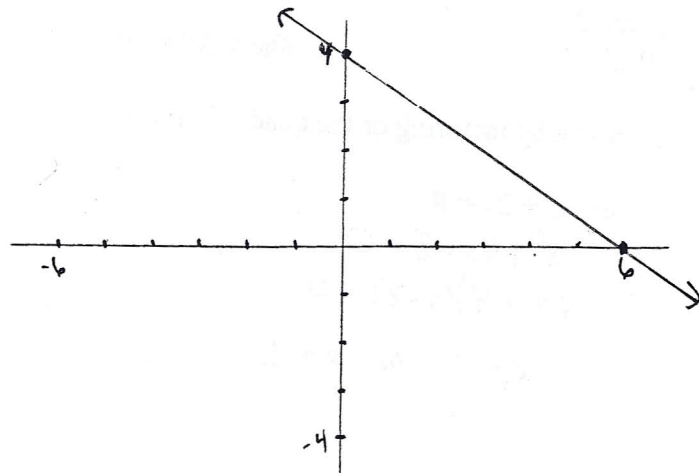


- 5) Graph  $2x + 3y = 12$  (make sure to label the intercepts)



- 6) Any line perpendicular to  $y = 3x + 5$  must have slope  $-\frac{1}{3}$ .

- 7) Find the equation of the line through  $(1, -3)$  with slope 2.

$$\begin{aligned} y - y_1 &= m(x - x_1) \\ y - (-3) &= 2(x - 1) \\ y + 3 &= 2x - 2 \\ y &= 2x - 5 \end{aligned}$$

- 8) According to the Boston Globe there is a relationship between runner injuries in the Boston Marathon and the temperature at the time of the race. The relationship is given by  $p = 0.27t - 8.46$  where  $p$  is the percentage of runners injured and  $t$  is the temperature in degrees Fahrenheit. In 1985 the temperature was 77 degrees Fahrenheit at the time of the race, what was the expected percentage of injuries?

$$p = 0.27(77) - 8.46 = 12.33$$

12.3% injuries