1. You are working at a company that pays you a salary of $2,500 a month plus $30 per hour of overtime that you work.

(a) If \( x \) represents the number of hours of overtime you work and \( y \) represents your total salary for the month, write a linear equation for this situation.

(b) Graph your linear equation.

(c) If in a certain month you are to work 5 hours of overtime, how much money will you make that month?

(d) How many hours of overtime would you have to work in order to make $2,800?
2. John starts 2 miles in front of the starting line at the Marathon. He then runs the marathon at a constant speed of 3 miles per hour.

(a) If \( x \) represents how many hours John has been running for and \( y \) represents John’s distance from the starting line, write a linear equation to represent this situation.

(b) Graph your linear equation.

(c) How long will it take John to be 26 miles from the starting line? 

(d) How far from the starting line is John after 2 hours?
Answer Key:

1. (a) \( y = 30x + 2500 \)
   (b) 
   ![Graph of Overtime Salary](image1)
   (c) $2650
   (d) 10 hours

2. (a) \( y = 3x + 2 \)
   (b) 
   ![Graph of John Runs the Marathon](image2)
   (c) 8 hours
   (d) 8 miles away