

**Problem 1.** Find the equation of the line which passes through the point  $(1, 2)$  and is parallel to the line  $y = 3x - 2$ . Sketch a graph containing both lines.

**Problem 2.** Team A offers a professional baseball player 3.5 million dollars per year plus a 5.9 million dollar signing bonus. Team B offers him 4.2 million dollars per year plus a 3.1 million dollar signing bonus. What is the minimum number of years he would have to play for Team B to make as much money as he would if he had signed with Team A? How much money will he make in that many years?

**Problem 3 (Extra Credit).** The locus of the equation  $x^2 + y^2 = 25$  is a circle of radius 5 centered at the origin. The line  $y = \frac{3}{4}x$  intersects this circle in two points. Find these points.