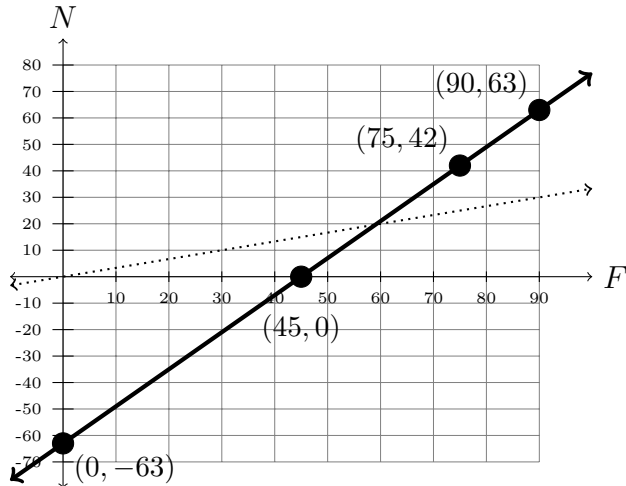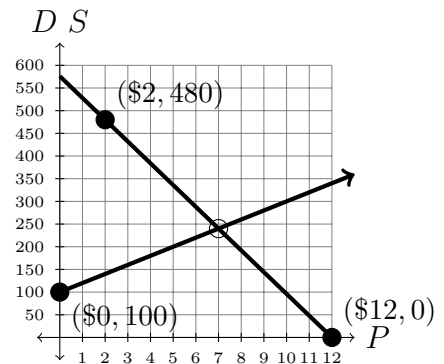**Name:** _____

Quiz on 1.4: Intersections of lines

Where do the lines $y = 2x + 1$ and $x + y = 4$ intersect?

Where do the lines $y = 3x$ and $7y = 5x + 8$ intersect?

The citizens of a warm country desire a new temperature scale so that they would see the zero degree temperature sometimes and their high temperatures would not appear too high. The proposed new scale Newtemp, or N for short, has the conversion formula: $N = \frac{7}{5}(F - 45)$ where F is the Fahrenheit temperature. When is the Fahrenheit temperature equal to 3 times the New temperature?

Soybeans Part 2: In a free market, the supply equation for a supplier of soybean is $S = 20P + 100$ where the price P is in dollars and S is in bushels. When the price is \$2 per bushel the demand is 480 bushels. When the price goes up to \$12 per bushel the demand drops to 0 bushels. Assuming that the demand function is $D = 576 - 48P$, find the equilibrium price and the number of bushels supplied at that equilibrium price.

Graph paper for 1.4: Intersections