Name _____

4-3A Lesson Master

USES Objective I

In 1 and 2, complete the table to solve the problem.

1. Entrepreneur A starts with $8,000 but invests poorly and loses $550 each year. Entrepreneur B begins with $2,500 and makes $400 each year thereafter. How many years will it be until B has more money than A?

Year	A	B

2. Suppose you are clinging to the bow of a sinking ship. You are 8 meters from the water and the sharks are circling around, but every minute brings you 1.3 meters closer. How long will it be until you are fish food?

Time	Distance from water

REPRESENTATIONS Objective L

3. In economics, the intersection of the supply and demand curves determines the market price of a commodity and the quantity supplied. Price is linearly related to the quantity supplied and demanded, respectively. Let $P_D = -x + 18$ be the demand equation, where x is the total quantity demanded, and P_D is the price consumers are willing to pay. Let $P_S = 2x$ be the supply curve where x is the quantity supplied by the producers at price P_S.

   a. Graph both lines, with P_S and P_D on the y-axis and x on the x-axis.

   b. Use the intersection of the lines to determine the quantity supplied and its market price.

      market price: _____

      quantity supplied: _____