

Name

4-3A Lesson Master

Questions on SPUR Objectives  
See pages 245–249 for objectives.

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*?
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?

Year	<i>A</i>	<i>B</i>

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: \_\_\_\_\_

