Companion Notes for MATH 229 Section 1.4.

1. Packer manufactures its products at a cost of \$12 per unit and a fixed cost of \$20,000 per month. They sell their products at \$20 per unit. Find the break even point.

   (a) What is the monthly loss sustained if only 2000 units of product are made and sold each month?

   (b) What is the monthly profit if 3500 units are made and sold each month?

   (c) How many should be made to produce a monthly profit of \$12,000?

A company in Germany manufactures clocks and has determined the demand equation on its clocks to be given by

$$2x + 7p - 56 = 0,$$

where p is in dollars and x is in 1000 units. The supply equation is determined to be

$$3x - 11p + 45 = 0.$$

Find the equilibrium quantity and price.