Troubleshooting:
Identifying Problems 180

The Problem

Revenue and Cost (Refer to Example 12.) The cost to produce one part is $1.50 plus one-time fixed cost of $2000. The revenue received from selling one part is $12.

a. Write a formula that gives the cost C of producing x parts. Be sure to include the fixed cost.

b. Write a formula that gives the revenue R from selling x parts.

c. Profit equals revenue minus cost. Write a formula that calculates the profit P from selling x parts.

d. What numbers of parts need to be sold to yield a positive profit?