Name:
Section 4.5
Math 151

1. You are a manager of a firm that sells slippers for \$20 a pair. You are producing 1200 pairs of slippers each month at an average cost of \$2 each. The Marginal cost at a production level of 1200 is \$3 per pair.

   (a) Are you making of losing money?
   Profit = Revenue - Cost. In this case, your monthly revenue is

   $$1200\text{slippers} \times \$20/\text{slipper} = \$24000$$

   and the monthly costs are

   $$1200\text{slippers} \times \$2/\text{slipper} = \$2400$$

   making the monthly profit $\$24000 - \$2400 = \$21600$

   (b) Will increasing production increase or decrease your average costs? Your proft?
   Since additional units produced cost about \$3 each, which is above the average cost, producing them increases average cost. Since additional pairs of slippers cost about \$3 to produce and can be sold for \$20, you can increase your profit by making and selling them. This is a case where marginal revenue, which is \$20 per slipper, is greater than marginal cost, which is \$3 per pair of slippers.

   (c) Would you recommend that production be increased or decreased?
   You should recommend increase in production, since that increases profit. The fact that average cost of production increases is irrelevant to your decision.