1. **(20 points)** Classify each of the following cost items as mostly fixed or variable.

   - Raw materials
   - Direct labor
   - Depreciation
   - Supplies, Utilities
   - Property taxes
   - Interest on borrowed money
   - Administrative salaries
   - Payroll taxes
   - Insurance (building and equipment)
   - Clerical salaries
   - Sales commissions
   - Rent

2. **(20 points)** A plant has a capacity of 4,100 hydraulic pumps per month. The fixed cost is $504,000 per month. The variable cost is $166 per pump, and the sales price is $328 per pump. (Assume that sales equal output volume.) What is the breakeven point in number of pumps per month? What percentage reduction will occur in the breakeven point if fixed costs are reduced by 18% and unit variable costs by 6%?

3. **(30 points)** A cell phone company has a fixed cost $1,000,000 per month and variable cost of $20 per month per subscriber. The company charges $29.95 per month to its cell phone customers.

   a) **(10 points)** What is the breakeven point for this company?

   b) **(10 points)** The company currently has 95,000 subscribers and proposes to raise its monthly fees to $39.95 to cover add-on features such as text messaging, song downloads, game playing, and video watching. What is the new breakeven point if the variable cost increases to $25 per customer per month?

   c) **(10 points)** If 20,000 subscribers will drop their service because of the monthly fee increase in Part (b), will the company still be profitable?
4. (30 points) A manufacturing company leases a building for $125,000 per year for its manufacturing facilities. In addition, the machinery in this building is being paid for in installments of 25,000 per year. Each unit of the product produced costs $20 in labor and $10 in materials. The product can be sold for $50.
   
   a. (10 points) How many units per year must be sold for the company to break even?
   
   b. (10 points) If 12,000 units per year are sold, what is the annual profit?
   
   c. (10 points) If the selling price is lowered to $40 per unit, how many units must be sold each year for the company to earn a profit of $100,000 per year?