Break Even Problems

1) A fashion designer makes and sells hats. The material for each hat costs $5.50. The hats sell for $12.50 each. The designer spends $1400 on advertising. How many hats must the designer sell to break even?

2) A puzzle expert wrote a new sudoko puzzle book. His initial costs are $864. Binding and packaging each book costs $.80. The price of the book is $2. How many books need to be sold to break even?

3) A carpenter makes and sells rocking chairs. The material for each chair costs $22.50. The chairs sell for $75 each. If the carpenter spends $420 on advertising, how many chairs must she sell to break even?

4) Printing a newsletter costs $1.50 per copy plus $450 in printer's fees. The copies are sold for $3 each. How many copies of the newsletter must be sold to break even?

5) A bicycle store costs $2400 per month to operate. The store pays an average of $60 per bike. The average selling price of each bicycle is $120. How many bicycles must the store sell each month to break even?

6) Producing a musical costs $88,000 plus $5900 per performance. One sold-out performance earns $7500 in revenue. If every performance sells out, how many performances are needed to break even?

7) You have $22 in your bank account and deposit $1.50 each week. At the same time your cousin has $218 but is withdrawing $13 each week. When will your accounts have the same balance?

8) Suppose you invest $10,410 in equipment to manufacture a new board game. Each game costs $2.65 to manufacture and sells for $20. How many board games must you make and sell before your business breaks even?

9) Several students decide to start a T-shirt company. After initial expenses for $280, they purchase each T-shirt wholesale for $3.99. They sell each T-shirt for $10.99. How many must they sell to break even?

10) Suppose you are thinking of buying one of two cars. Car A will cost $17,655. You can expect to pay an average of $1230 per year in gas, maintenance, and repairs. Car B will cost $15,900. Fuel, maintenance, and repairs for it will average about $1425 per year. After how many years are the total costs for the cars the same?