Fo r each problem, define the variables and then write a system of equation then solve.

1) Katherine is deciding which catering company she should use for Mom's 50th birthday party. At Bashful's Birthday Blast there is a fee of \$20.00 and a charge of \$9.00 per person. At Bertha's Ballroom Blitz there is a fee of \$100 and a charge of \$5.00 per person. For how many people will the cost become equal? What is that cost?

2) Two companies sell stock shares on Wall Street. Losers Incorporated stock starts with a value of \$39.63 and loses \$0.08 for each new stockholder. The "Be Rich with Us" Corporation starts with a value of \$24.45 and gains \$0.03 in value for each new stockholder. At how many new stockholders will the value be equal? What is that value? (Solve by graphing)

3) Farmer Peter and Farmer Paula are picking apples from their apple trees. Farmer Peter has already picked 287 apples. Farmer Peter picks another 5 apples each minute. Farmer Paula has already picked 154 apples. Farmer Paula picks another 6 apples each minute. After how many minutes will the number of apples be the same? How many apples would each farmer have picked? (Solve by graphing and algebraically)