1. The product of two positive real numbers x and y is 24. Find the minimal value of the expression $3x + 2y$.

2. Stacy has $400 to spend on materials for a fencing project. She needs to fence in a rectangular portion of her yard. For the fencing along the front and back she can use cheap materials costing $5 per foot. However, for the sides (which are visible to the neighbors) she must use a more expensive type of fencing which costs $15 per foot. What dimensions should the fence be in order to enclose the largest area possible?

3. A manufacturer has been selling 1000 televisions a week at $450 each. A survey indicates that for each $10 the price is lowered, the number of sets sold will increase by 100 per week. How large a rebate should the company offer the buyer in order to maximize its revenue?