Net Change

Use a calculator

- 1. Water evaporates from an artificial lake at a rate of $e(t) = 10e^{0.4t}$ gallons per hour, where t is measured in hours for $0 \le t \le 24$.
 - a. How much water has evaporated after 12 hours?

b. If there was 500,000 gallons of water initially in the lake, how much water will be in the lake after 24 hours?

2. The rate at which a company takes orders (in orders per hour) is modeled by the function $F(t) = 20 + 8\cos\frac{t}{\pi}$ for $0 \le t \le 12$, where t is measured in hours. To the nearest whole number, how many orders come through over the 12 hour period?