1. (5.3 #21) A movie theater has a seating capacity of 3000 people. The number attending a show at price $p$ per ticket is

$$q = \frac{18000}{p} - 1500.$$ 

Currently the price is $6 per ticket.

(a) Is the demand elastic or inelastic at $p = 6$?

(b) Is the price lowered, will revenue increase or decrease?
2. (6.1 #13&15) Determine the following:

(a) \[ \int \left( \frac{2}{x} + \frac{x}{2} \right) \, dx \]

(b) \[ \int x \sqrt{x} \, dx \]