Question: When soda is sold for \$0.8 dollars per can, approximately 6500 cans are sold. After the price is raised to \$1.00 dollar, the demand drops to 4000 cans.

a) To find the demand as a function of price, find the rate at which the demand changes versus price. This means find the slope.

$$\text{slope}=\frac{\text{change in demand}}{\text{change in price}}=\frac{4000\text{-}6500}{1.00\text{-}0.80}=\frac{\text{-}2500}{0.2}=\text{-}12500$$

You can write a function now. D(p)=-12500(p)+6500

This is of the form y=mx+b, where m=12500, x is p and 6500 is b

b) According to this equation, a price of \$1.05 per can yields a demand of 3375
Be sure to plug in the difference between 1.05 and 0.8. That's 0.25
D(0.25)=-12500(0.25)+6000=-3125+6000 = 3375 cans