Demand and supply for GPS units in a competitive market is given by Qd = 750 - 2P and supply is Qs = 3P. Each identical firm has marginal costs MC = 6Q and average total costs ATC = 3Q.

- a) What is equilibrium price and quantity traded in the market?
- b) How much does each firm produce?
- c) What is each firm's average revenue?
- d) Are firms making positive, normal or negative economic profits?
- e) For argument's sake, say that min ATC = \$75 (clearly it doesn't). How many firms will there be in the long run?
- f) Suppose the government institutes a \$20 per unit tax on consumers. The new, after tax demand curve is Qd = 710 2P.
  - i) What is the deadweight loss due to the tax?
  - ii) What are the consumer and producer burdens of the tax?
  - iii) Which is more inelastic demand or supply?
- g) Forget about the tax and return to the original equilibrium. Suppose the government imposes a price floor of \$180 in the market.
  - i) What is producer surplus both before and after the price floor is imposed?
  - ii) Which is larger the change in producer surplus or the deadweight loss?