1. Short Answer Questions

1. A market
   
   A) always involves the personal exchange of goods for money.
   
   B) allows interactions between consumers and firms.
   
   C) always takes place at a physical location.
   
   D) has no influence on prices.

2. Which of the following is an example of a normative statement?
   
   A) A higher price for a good causes people to want to buy less of that good.
   
   B) A lower price for a good causes people to want to buy more of that good.
   
   C) To make the good available to more people, a lower price should be set.
   
   D) If you consume this good, you will be better off.

3. True or False: If a model fits reality but doesn’t generate testable predictions, it is of little value to economists.

4. Legislators argue that a minimum wage law is instituted to help poor people. Economists can attack the minimum wage law on two fronts. First, some argue that government should not help the poor. Second, some argue that minimum wage laws actually hurt the poor because it creates unemployment. Which argument is normative and which is positive?
2. Math Review Questions

1. What is the partial derivative, \( \frac{\partial f}{\partial x} \) and \( \frac{\partial f}{\partial y} \) of:

   (a) \( f(x, y) = 2x^2 + 4y^3 \).
   
   (b) \( f(x, y) = 2x^2y^3 \).
   
   (c) \( f(x, y) = 5 \ln(x) \ln(y) \).
   
   (d) \( f(x, y) = 2 \ln(x) + \frac{1}{2}y \)

2. Consider the following function. Graph them, along with labeled axis and show at what \( x \) and \( y \) values the function intersects the axis.

   (a) \( f(x) = 10 - 2x \)
   
   (b) \( f(x) = \frac{10}{x} + 10 \).
   
   (c) \( q(p) = 8 - 2p^2 \).
   
   (d) \( 5p - 10q = -20 \).

3. The following functions need to be maximized (show (i) the first-order conditions i.e. \( \frac{\partial f}{\partial x} = 0 \) and \( \frac{\partial f}{\partial y} = 0 \) and (ii) solve them for the solutions):

   (a) \( f(x) = 10 - 2x^2 \)
   
   (b) \( f(y) = 10 + 5y - y^2 \)
   
   (c) \( f(x, y) = -2(2x + 10)^2 - 10(y - 5)^2 \)
   
   (d) \( f(x, y) = xy - \frac{x^2}{2} - y^2 + 10x - 30y + 50 \)