Note that all problem sets include both problems to turn in and review problems. Look over the review problems before working on the problem sets, because often they contain material showing you how to do the problems.

1. *psquared.* Suppose the demand function for a good is \( q = 100 - 2p^2. \)
   
   (a) Find the first and second derivatives of this demand function. What are the signs of the derivatives?
   
   (b) Graph this demand function. Explain how your answer to part (a) affects the shape of the curve.
   
   (c) Find an expression for the price elasticity of demand.

2. *SW25.1* Which of the three traits of money do the following assets have, and which are they missing: a house, a day pass to an amusement park, Euros held by a resident of New Haven, CT, a painting, gold.

3. *Niko.* In 2001, Niko bought four video game consoles: one from Microsoft for $300, one from Sony for $300, and two from Nintendo for $200 each.

   In 2006 Niko checked out the prices for systems from each manufacturer. A new console from Microsoft cost $280, a new console from Sony cost $400, and a new console from Nintendo cost $250.

   (a) Suppose we treat each console as an unchanging good, e.g. a 2001 console from Microsoft is the same as a 2006 console from Microsoft. Assuming all Niko buys are the consoles mentioned above, calculate a consumer price index for 2006 with 2001=100.
(b) Using the Rule of 70 and your answer to (a), how long will it take for video game prices to double. (Be careful, your answer to part (a) is five years of inflation, not one.)

(c) All three systems are upgraded with many new and better features: Microsoft Xbox to Xbox 360, Sony Playstation 2 to Playstation 3, Nintendo GameCube to Wii. Given this, is Niko worse off from the inflation?

(d) Recall the three characteristics of money. Would Sony’s Playstation 2 from 2001 make a good money?

Review Problems only, not to turn in:

4. According to Jerry Muller’s book *The Mind and the Market*, what were the two traditions in Western thought that made commerce and money-lending disreputable occupations?

5. Identify the following as positive or normative statements:

   (a) “Hard bop” jazz music causes warts and hearing loss.
   (b) Free jazz music is an unparalleled musical experience.
   (c) The U.S. unemployment rate is lower than at this time last year.
   (d) The U.S. unemployment rate is still too high.
   (e) Unemployment in teenage labor markets would go up if the minimum wage were raised.
   (f) The government should raise the minimum wage.
Answers to Review Problems:

5. The first tradition is the *civic* tradition, alternatively the *civic republican* or *classical* tradition. Going back to Aristotle, it says that a citizen's proper focus is the *polis* or state. The state is best served by citizens engaged in public affairs and managing their estates for agriculture. Commerce and labor are distasteful and should be left to foreigners and slaves.

The second tradition is the *Christian* tradition which is based on Biblical passages including Gospel accounts of Jesus' sayings and actions. These regard commerce and especially money-lending as immoral. They are based on zero-sum thinking that if one person gets richer, it necessarily means someone else gets poorer. Later Christian thinkers drew on Aristotle's notions of natural and unnatural uses of goods to bolster this tradition.

The two traditions were combined to force Jews into the money-lending role in the late Middle Ages, since Jews could be classified as both foreigners and non-Christians.

6. (a) P
   (b) N
   (c) P
   (d) N or P, depending on interpretation of "too high:” “too high to achieve positive condition X” or “undesirably high.”
   (e) P
   (f) N