Practice HW #5 Answer Key

Section 1

1. Marginal cost is defined as the change in total cost as one more unit of output is produced. It eventually declines in the short run as a result of decreasing marginal product of labor.

2. Long run average cost is the “bottom envelope” of the short run average cost curves. Economies of scale is the decreasing –sloped part of the curve, constant return to scale is the horizontal portion of the curve, and decreasing returns to scale is the upward sloping part of the curve.

3. In the short run, at least one of the inputs is fixed in quantity. In the long run, all inputs can be varied in number. In the SR, since you have a fixed amount of an input (usually Kapital) and variable labor, you have diminishing marginal product of labor occur at some point. In the long run, you can avoid diminishing marginal product of labor by adding more capital.

4. If the price is constant (say $5), then the next unit you sell will be at $5 (so, MR=$5). Also, if all units are sold at $5, then the average is $5 (Average Revenue=$5)

5. Too many small firms with little market share selling homogeneous goods.

6. Firms do not want to operate on the decreasing returns to scale portion of the LRAC. If the DRS occurs at a low output quantity, then firms will stay small. However, if DRS doesn’t occur until a much higher output, then firms will be bigger.

Section 2

1. A. 50 units, $100 profit. (set MR=MC to find optimal quantity); B. 30 units , $60 profit

2. A. 400 units, $10,000 profit; B. 6 units, $120