Extra Exercises

Perfect Competition in the Short Run

1. $Q_d = 500 - 25p$
   $$CT(Q_i) = Q_i^2 + 25; \quad n = 50$$
2. $Q_d = 40 - 4p$
   $$CT(Q_i) = Q_i^2; \quad n = 40$$
3. $Q_d = 10 - \frac{1}{5}p$
   $$CT(Q_i) = Q_i^2; \quad n = 10$$
4. $Q_d = 420 - 20p$
   $$CT(Q_i) = Q_i^2 + 1; \quad n = 100$$
5. $Q_d = 100 - 2p$
   $$CT(Q_i) = Q_i^2 + 9; \quad n = 4$$

Monopoly

1. $Q_d = 200 - p$
   $$CT(Q_i) = 40Q_i + 10$$
2. $Q_d = 100 - \frac{1}{2}p$
   $$CT(Q_i) = 40Q_i + 10$$
3. $Q_d = 400 - 2p$
   $$CT(Q_i) = 100Q_i$$
4. $Q_d = 100 - p$
   $$CT(Q_i) = 20Q_i$$
5. $Q_d = 120 - p$
   $$CT(Q_i) = Q_i^2 + 100$$