1. (2 Points) Find the Herfindahl Index for an industry composed of three firms where one of the firm controls 50% of the market while the other two control respectively 40% and 10% of the market.

2. Schotter Inc. and Porter Corp. operate as a centralized cartel. Their marginal cost functions are defined as:

\[ MC_{SI} = 25Q_{SI} \quad \text{and} \quad MC_{PC} = 5Q_{PC} \]

The firms face the following market demand curve:

\[ Q = 8000 - 0.10P \]

a. (3 points) Determine the market price that the firms should charge.

b. (3 points) Which firm should be producing how much?

c. (2 points) Show that their joint output matches the industry demand at the equilibrium price.
Use the following graph to answer the question(s) below.

![Graph with kinked demand curve]

1. Refer to the kinked demand graph. If an oligopolistic firm with constant unit cost equal to $60 faces this demand curve, then the firm will
   A. produce 2 units of output.
   B. produce 3 units of output.
   C. produce 4 units of output.
   D. None of the above is correct.

2. Refer to the kinked demand graph. If an oligopolistic firm with constant unit cost equal to $60 faces this demand curve, then the firm will
   A. charge $60.00 per unit.
   B. charge $65.00 per unit.
   C. charge $70.00 per unit.
   D. None of the above is correct.