Problem Set 2

Due in Lecture on Wednesday, February 22.

Problem 1

Starting from the long–run equilibrium without trade in the monopolistic competi-
tion model, as illustrated in Figure 6–5, consider what happens when the Home
country begins trading with *two* other identical countries. Because the countries are
all the same, the number of consumers in the world is *three* times larger than in a sin-
gle country, and the number of firms in the world is *three* times larger than in a sin-
gle country.

a. Compared with the no–trade equilibrium, how much does industry demand D
    increase? How much does the number of firms (or product varieties) increase?
    Therefore, does the demand curve D/N^A still apply after the opening of trade?
    Explain why or why not.

b. Does the d_1 curve shift or pivot due to the opening of trade? Explain why or why
    not.

c. Compare your answer to (b) with the case in which Home trades with only one
    other identical country. Specifically, compare the elasticity of the demand curve
    d_1 in the two cases.

d. Illustrate the long–run equilibrium with trade and compare it with the long–run
    equilibrium when Home trades with only one other identical country.

Problem 2

Starting from the long–run trade equilibrium in the monopolistic competition
model, as illustrated in Figure 6–7, consider what happens when industry demand, D,
increases. For instance, suppose that this is the market for cars and lower gasoline
prices generate higher demand D.

a. Redraw Figure 6–7 for the Home market and show the shift in the D/N^T curve
    and the new short–run equilibrium.

b. From the new short–run equilibrium, is there exit or entry of firms, and why?

c. Describe where the new long–run equilibrium occurs, and explain what has hap-
    pened to the number of firms and the prices they charge.

Problem 3

The United States, France, and Italy are among the world's largest producers. To answer the following questions, assume that their markets are monopolistically competitive, and use the gravity equation with $B = 93$ and $n = 1.25$.

	GDP in 2012 ($bn)	Distance from the United States (miles)
France	$ 2,776	5,544
Italy	2,196	6,229
United States	14,991	—

a. Using the gravity equation, compare the expected level of trade between the United States and France and between the United States and Italy.

b. The distance between Paris and Rome is 694 miles. Would you expect more French trade with Italy or with the United States? Explain what variable (i.e., country size or distance) drives your result.