

(1) [15 points] See the solution for Problem Set # 10(f), or the Fall 2008 Final exam.

(2) [10 points] The subgame-perfect equilibrium strategies are

$$x_3 = BR_3(x_2) = \begin{cases} \frac{2}{5} - \epsilon & \text{if } x_2 > \frac{3}{5} \\ x_2 + \epsilon & \text{if } x_2 < \frac{3}{5}, \end{cases} \quad \text{and} \quad x_2 = \frac{3}{5} + \epsilon.$$

(3) [10 points] See the solution for Problem Set # 14(b), or the Fall 2008 Final exam.

(4) [15 points] Initial profit levels are:

$$\pi_O(120, 80) = (120 - 60)(240 - 2 \cdot 120 + 80) = 4800, \quad \text{and} \quad \pi_T(120, 80) = (80 - 60)(120 - 2 \cdot 80 + 120) = 1600.$$

Now, set $p_O = (1 + 0.05)120 = 126$. Then,

$$\pi_O(126, 80) = (126 - 60)(240 - 2 \cdot 126 + 80) = 4488 < 4800.$$

Hence, the relevant market for orange juice alone is not the relevant market for the ORANGADA company.

Next,

$$\begin{aligned} \pi_O(126, 80) + \pi_T(126, 80) &= 4488 + (80 - 60)(120 - 2 \cdot 80 + 126) = 4488 + 1720 = 6208 \\ &< 6400 = \pi_O(120, 80) + \pi_T(120, 80). \end{aligned}$$

Hence, the relevant market for the ORANGADA company is broader market than combined market for orange and tomatoe juice and should include more juices, such as, possibly, mango juice and perhaps others.

(5) [10 points] See the solution for Problem Set # 14(f).

(6) [10 points] See the solution for Problem Set # 14(i), or the Spring 2008 Final exam.

(7) [5 points] See the solution for Problem Set # 16(b), or the Spring 2008 Final exam.

(8) [10 points] See the solution for Problem Set # 18(d), or the Spring 2008 Final exam.

(9) [15 points] See the solution for Problem Set # 21(b), or the Fall 2008 Final exam.

THE END