

Econ_101_Spring 2007_IVY Tech College
Chapter_07:_Sample Problems: Solutions

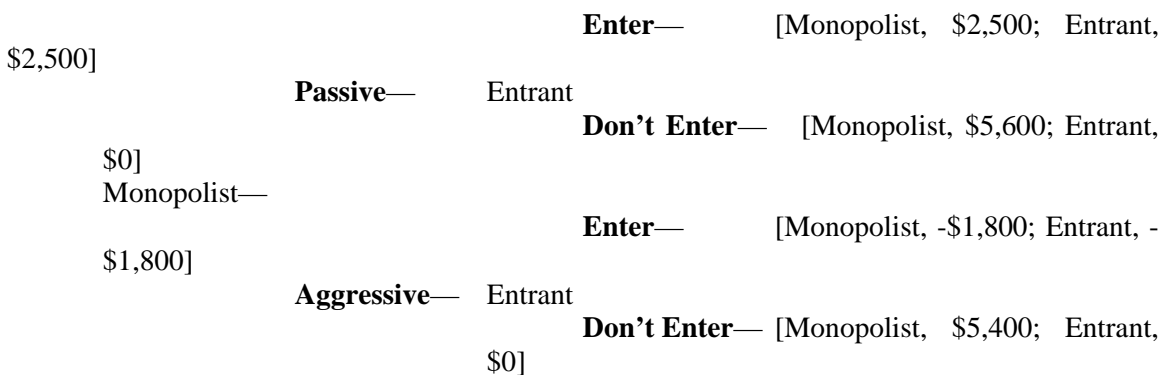
4. Consider two firms, Speedy and Hustle, that provide land transportation from the downtown area to the airport. The practice of guaranteed price matching is illegal.
- If the two firms act independently (they do not engage in price fixing or any other collusive behavior), each firm will serve 100 passengers per day at a price of \$20 and an average cost of \$15.
 - Under a price-fixing or cartel arrangement, each firm would serve 75 passengers at a price of \$28 and an average cost of \$18.
 - If one firm charges \$20 and the other firm charges \$28, the low-price firm will earn a profit of \$900 and the high-price firm will earn a profit of \$400. Speedy picks a price first, followed by Hustle.

Draw a game tree for the price-fixing game and predict the outcome.

The profit per firm under the duopoly outcome is \$500 (a profit of \$5 per passenger times 100 passengers). The profit per firm under the cartel is \$750 (a profit of \$10 per passenger times 75 passengers). Each firm will pick the low price.

6. Consider the market for air travel between Madison and Chicago. The long-run average cost is constant at \$200 per passenger, and the demand curve is linear, with a slope of -\$1 per passenger. A secure monopolist would charge a price of \$280 and serve 70 passengers per day. The other possible prices are \$260 for an insecure monopolist, \$250 for the duopoly outcome, and \$180 for the case in which one firm picks a large quantity and a low price but the second firm enters anyway.
- a. Use these numbers to draw two figures, one like Figure 12.7 and a second like Figure 12.8. Provide a complete set of numbers, and briefly explain how you got them. Label any curves that you draw, and identify the relevant points on your graph.

For the first figure, the prices are given above. There should be a constant long-run average cost curve on the graph. The insecure monopolist will produce 90, the duopoly will produce 100, and the case where the monopolist produces a large quantity but the entrant comes in anyway implies a quantity of 180 (90 for each firm).



- b. Use your second figure to predict the outcome of the entry-deterrence game. What is the price of air travel?

The monopolist will produce a high quantity, and the entrant will not come in. The price of air travel will be \$260.

7. The construction project at your city's airport is nearing completion, and your job is to decide how to use the 10 new gates of the airport. The city is currently served by Gotcha Airline,

The benefit to the city is the \$20 million provided by Gotcha. However, the cost is the loss of potential new competition and thus reduced airfares.