**Rational Decision Making**

**LVL I Answer the following questions as you read**

1. What must be considered when making a choice?
2. Define marginal benefit and marginal cost.
3. When should a choice be made when weighing costs and benefits?
4. Define revenue and profit.
5. What factors do business firms need to consider when deciding on how many workers to hire?
6. Based on the business expenditures chart, how many workers should the firm hire, and why?
7. Define incentives.

**SSEF2 Give examples of how rational decision making entails comparing the marginal benefits and the marginal costs of an action.**

1. **Define marginal cost and marginal benefit.**

 **Marginal** is defined in economics as small or incremental change. **Marginal benefit** refers to the additional positive value one receives from undertaking one more unit of an action. For example, the marginal benefit of running one more mile after running the previous two miles could be the additional calories burned. **Marginal cost** refers to the additional amount of effort, expense, or time one incurs from undertaking one more unit of an action. For example, the marginal cost of running one more mile after running the previous six miles could be eight minutes of time one could have devoted to another pursuit such as studying for an exam or reconsidering why you decided to run cross country in the first place.

**b. Explain that rational decisions occur when the marginal benefits of an action equal or exceed the marginal costs.**

 Rational actors in the economy will only select a choice if the **marginal benefits** of it are equal to or greater than the **marginal costs** of the action. In microeconomics, one benefit a firm receives from selling a product is the revenue (price times the quantity). One cost associated with producing a product is the cost of the human resources required to make the product. A rational firm wants to know how many workers it should hire to maximize its profit. Profit is revenue minus costs. An economist would tell the firm to hire the number of workers at which the marginal revenue generated by the human resource is equal to the marginal cost of hiring the human resource. Consider an example in which the wage for each worker you hire is $10.00 an hour and the price of your product is $2.50. In the table below, the marginal revenue (benefit) of each additional worker is equal to the marginal cost of each additional worker when the firm hires worker #3. A rational firm would not hire the 4th worker because the marginal cost of that worker is greater than the marginal benefit.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Number of Workers | Total Units Produced | MarginalNumber ofUnitsProduced | Price ofEach UnitProduced | TotalRevenue for the UnitsProduced | MarginalRevenue forGenerated by EachAdditional Worker | MarginalCost ofHiring EachAdditional Worker |
| 0  | 0  | \_\_\_\_\_\_\_  | $2.50  | 0  | \_\_\_\_\_\_\_  | \_\_\_\_\_\_\_\_  |
| 1  | 6  | 6  | $2.50  | $15.00  | $15.00  | $10.00  |
| 2  | 11  | 5  | $2.50  | $27.50  | $12.50  | $10.00  |
| **3\***  | **15**  | **4**  | **$2.50**  | **$37.50**  | **$10.00\***  | **$10.00\***  |
| 4  | 18  | 3  | $2.50  | $45.00  | $7.50  | $10.00  |
| 5  | 20  | 2  | $2.50  | $50.00  | $5.00  | $10.00  |
| 6  | 21  | 1  | $2.50  | $52.50  | $2.50  | $10.00  |

**c. Explain that people, businesses, and governments respond to positive and negative incentives in predictable ways.**

 In the study of economics, an **incentive** motivates individuals, businesses, and/or governments to undertake an action or avoid an action. Incentives are positive when these actors in the economy choose an option associated with a perceived benefit or gain. Incentives are negative, sometimes called disincentives, when actors in the economy avoid a particular option because they associate it with a cost that is too high. Traditionally, the field of economist believes individuals, businesses, and governments will respond predictably to positive and negative incentives.

**LVL II Consider the following questions**

1. What must be considered when making a choice?
2. When should a choice be made when weighing costs and benefits?
3. What factors do business firms need to consider when deciding on how many workers to hire?
4. Based on the business expenditures chart, how many workers should the firm hire, and why?
5. What is an example for both a positive and negative incentive?

**LVL III Do the Following**

1. Create a rational decision making grid for the purchase of a new smartphone, indicating the costs and benefits of that decision.
2. What are the incentives for businesses to offer college scholarships to high school students?