

Chapter 2

Student: _____

1. The variety of models and options available to customers is an example of key purchasing criteria that establishes the basis of competition.

True False
2. A characteristic that was once an order winner may become an order qualifier, and vice versa.

True False
3. Order qualifiers are those characteristics of an organization's goods or services that cause them to be perceived as better than the competition.

True False
4. The purchasing criteria of quality and timeliness of delivery are order winners for all companies.

True False
5. It is important that an organization has a clear and simple mission/vision/values statement.

True False
6. A mission statement should provide a guide for the formulation of strategies for the organization.

True False
7. If you think of goals as destinations, then tactics are the roadmaps for reaching the destinations.

True False
8. Strategic planning includes both determining long-term plans and implementing them through allocation of resources and action plans.

True False

9. Organizational strategy must be determined without considering the realities of functional area strengths and weaknesses.
- True False
10. Tactics are short-term projects to accomplish a specific objective, assigned to an individual, with a deadline and the resources needed identified.
- True False
11. The hierarchy of planning and decision-making is: mission/vision, goals, strategies, tactics, and action plans.
- True False
12. Making trade-offs among competitive priorities should be avoided in developing operations strategies.
- True False
13. Formulating an operations strategy requires focusing solely on the operations function, leaving the concerns of other functions and the status of external markets to broader organizational strategic planning.
- True False
14. In large manufacturing organizations, the operations function tends to adopt a passive role in strategic planning, relying on the functional areas of marketing and finance to establish the strategic direction of the organization.
- True False
15. Vertical integration refers to the ownership of a major part or the whole of the supply chain.
- True False
16. Matching a competitor on quality or price is usually sufficient to gain market share.
- True False

17. Time-based strategies focus on reducing the time required to accomplish certain activities, such as new product development or delivery to the customer.
- True False
18. Typically a manufacturing firm would not consider Enterprise Resource Planning (ERP) software as part of the organizations operations strategy.
- True False
19. In the 1990's Japanese manufacturing companies tended to shift their strategic orientation away from continuous improvement towards strategies based on low labour costs.
- True False
20. Productivity is defined as the ratio of output to input.
- True False
21. Labour costs are included as one of the inputs in all productivity measures.
- True False
22. Labour productivity is one example of a multifactor productivity measurement.
- True False
23. Tracking productivity measures over time enables managers to judge organizational performance and to decide where improvements are needed.
- True False
24. Productivity is directly related to competitiveness.
- True False
25. Even though labour cost as a proportion of total cost has been decreasing in manufacturing companies, labour productivity is still the main measure being used to gauge the performance of individuals and plants.
- True False

26. Labour productivity is an example of a total productivity measure.
- True False
27. Service productivity is easier to measure than manufacturing productivity because it is more labour intensive.
- True False
28. Workers are the main determinant of productivity.
- True False
29. Computer automation will always result in increased productivity.
- True False
30. Variability of the output of services makes it more difficult to measure service productivity.
- True False
31. Product variety is an example of:
- A.
B.
C.
D.
E.
32. Which of the following is not one of the competitive priorities organizations emphasize as the basis of competing with one-another?
- A.
B.
C.
D.
E.

33. Which of the following is not a key purchasing criterion?
- A.
 - B.
 - C.
 - D.
 - E.
34. Characteristics that customers perceive as minimum standards of acceptability are called:
- A.
 - B.
 - C.
 - D.
 - E.
35. Strategies have a(n) _____ impact on the general direction and basic character of a company.
- A.
 - B.
 - C.
 - D.
 - E.
36. The shared beliefs of an organizations stakeholders are its:
- A.
 - B.
 - C.
 - D.
 - E.

37. Of the following, which aspect of strategic planning involves medium or short-term projects to accomplish specific objectives?
- A.
 - B.
 - C.
 - D.
 - E.
38. Which of the following are major decision-making categories for operations policies and action plans?
- I. Facility
 - II. Capacity
 - III. Process types and technology
 - IV. Human Resources
- A.
 - B.
 - C.
 - D.
 - E.
39. Which of the following are steps for formulating an operations strategy?
- I. Link the organizational goals to the operations strategy.
 - II. Define the mission and values of the organization.
 - III. Conduct an audit to determine the strengths/weaknesses of the current operations strategy.
 - IV. Assess the degree of focus at each plant.
- A.
 - B.
 - C.
 - D.
 - E.

40. The generic operations strategy that emphasizes capital-intensive methods to achieve higher labour productivity and lower unit costs is referred to as _____.
- A.
 - B.
 - C.
 - D.
 - E.
41. Radical process redesign based on process re-orientation, breaking down functional silos and integrating operations into customer-focused processes are tactics associated with what generic operations strategy?
- A.
 - B.
 - C.
 - D.
 - E.
42. Time-Based strategies do not focus on:
- A.
 - B.
 - C.
 - D.
 - E.
43. Productivity is expressed as:
- A.
 - B.
 - C.
 - D.
 - E.

44. A measure of productivity which reflects a combination of some or all of the resources used to obtain a certain output is:
- A.
 - B.
 - C.
 - D.
 - E.
45. Canvalves Company produces cast bronze valves on an assembly line. It currently produces 800 valves each 8-hour shift. If the production is increased to 1,200 valves each shift, the productivity increases by:
- A.
 - B.
 - C.
 - D.
 - E.
46. In an assembly operation at a furniture factory, six employees assembled an average of 450 standard dining chairs per 5-day week. What is the labour productivity of this operation?
- A.
 - B.
 - C.
 - D.
 - E.

47. The weekly output of a fabrication process is shown below together with data for labour and material inputs. Standard selling price is \$125 per unit. Overhead is charged weekly at the rate of \$1,500 plus .5 times direct labour cost. Assume a 40-hour week and an hourly wage of \$16. Material cost is \$10 per linear foot. What is the average multifactor productivity?

Week	Output	# Workers
1	392	5
2	408	6

- A.
B.
C.
D.
E.
48. Which of the following are not true of productivity measures?
- A.
B.
C.
D.
E.
49. Which of the following is not a factor that affects productivity?
- A.
B.
C.
D.
E.
50. Which of these factors affects productivity?
- A.
B.
C.
D.
E.

51. Which of the following is not a general factor that affects productivity?

- A.
- B.
- C.
- D.

52. A company has introduced a process improvement that reduces processing time for each unit, so that output is increased by 25% with less material, but one additional worker required. Under the old process, five workers could produce 60 units per hour. Labour costs are \$12/hour, and material input was previously \$16/unit. For the new process, material is now \$10/unit. Overhead is charged at 1.6 times direct labour cost. Finished units sell for \$31 each. What increase in productivity is associated with the process improvement?

53. The manager of a carpet store is trying to determine optimal installation crew size. He has tried various crew sizes with the results shown below. Compute the average labour productivity for each crew size. Which crew size do you recommend?

<u>Crew Size</u>	<u>Yards</u>
2	
4	1
3	1
3	1
4	1
2	

54. The weekly output of a production process is shown below, together with data for labour and material inputs. The standard inventory value of the output is \$125 per unit. Overhead is charged weekly at the rate of \$1500 plus .5 times direct labour cost. Assume a 40-hour week and an hourly wage of \$16. Material cost is \$10 per running foot. Compute the average multifactor productivity for this process.

<u>Week</u>	<u>Output</u>	<u># Workers</u>
1	412	6
2	364	5
3	392	5
4	408	6

Chapter 2 Key

1. The variety of models and options available to customers is an example of key purchasing criteria that establishes the basis of competition.

TRUE

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #1

Topic: 02-01 Competitiveness

2. A characteristic that was once an order winner may become an order qualifier, and vice versa.

TRUE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #2

Topic: 02-01 Competitiveness

3. Order qualifiers are those characteristics of an organization's goods or services that cause them to be perceived as better than the competition.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #3

Topic: 02-01 Competitiveness

4. The purchasing criteria of quality and timeliness of delivery are order winners for all companies.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Hard

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #4

Topic: 02-01 Competitiveness

5. It is important that an organization has a clear and simple mission/vision/values statement.

TRUE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #5

Topic: 02-03 Mission, Vision, and Values

6. A mission statement should provide a guide for the formulation of strategies for the organization.

TRUE

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #6

Topic: 02-03 Mission, Vision, and Values

7. If you think of goals as destinations, then tactics are the roadmaps for reaching the destinations.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Hard

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #7

Topic: 02-02 Strategic Planning

8. Strategic planning includes both determining long-term plans and implementing them through allocation of resources and action plans.

TRUE

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #8

Topic: 02-02 Strategic Planning

9. Organizational strategy must be determined without considering the realities of functional area strengths and weaknesses.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #9

Topic: 02-02 Strategic Planning

10. Tactics are short-term projects to accomplish a specific objective, assigned to an individual, with a deadline and the resources needed identified.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #10

Topic: 02-02 Strategic Planning

11. The hierarchy of planning and decision-making is: mission/vision, goals, strategies, tactics, and action plans.

TRUE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #11

Topic: 02-02 Strategic Planning

12. Making trade-offs among competitive priorities should be avoided in developing operations strategies.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #12

Topic: 02-04 Operations Strategy

13. Formulating an operations strategy requires focusing solely on the operations function, leaving the concerns of other functions and the status of external markets to broader organizational strategic planning.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #13

Topic: 02-04 Operations Strategy

14. In large manufacturing organizations, the operations function tends to adopt a passive role in strategic planning, relying on the functional areas of marketing and finance to establish the strategic direction of the organization.

FALSE

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #14

Topic: 02-04 Operations Strategy

15. Vertical integration refers to the ownership of a major part or the whole of the supply chain.

TRUE

Accessibility: Keyboard Navigation

16. Matching a competitor on quality or price is usually sufficient to gain market share.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Easy
Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.
Stevenson - Chapter 02 #16
Topic: 02-01 Competitiveness

17. Time-based strategies focus on reducing the time required to accomplish certain activities, such as new product development or delivery to the customer.

TRUE

Accessibility: Keyboard Navigation
Difficulty: Medium
Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.
Stevenson - Chapter 02 #17
Topic: 02-04 Operations Strategy

18. Typically a manufacturing firm would not consider Enterprise Resource Planning (ERP) software as part of the organization's operations strategy.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Easy
Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.
Stevenson - Chapter 02 #18
Topic: 02-04 Operations Strategy

19. In the 1990's Japanese manufacturing companies tended to shift their strategic orientation away from continuous improvement towards strategies based on low labour costs.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Medium
Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.
Stevenson - Chapter 02 #19
Topic: 02-04 Operations Strategy

20. Productivity is defined as the ratio of output to input.

TRUE

Accessibility: Keyboard Navigation

21. Labour costs are included as one of the inputs in all productivity measures.

FALSE

22. Labour productivity is one example of a multifactor productivity measurement.

FALSE

23. Tracking productivity measures over time enables managers to judge organizational performance and to decide where improvements are needed.

TRUE

24. Productivity is directly related to competitiveness.

TRUE

25. Even though labour cost as a proportion of total cost has been decreasing in manufacturing companies, labour productivity is still the main measure being used to gauge the performance of individuals and plants.

TRUE

26. Labour productivity is an example of a total productivity measure.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Easy
Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.
Stevenson - Chapter 02 #26
Topic: 02-06 Measuring Productivity

27. Service productivity is easier to measure than manufacturing productivity because it is more labour intensive.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Easy
Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.
Stevenson - Chapter 02 #27
Topic: 02-07 Productivity Measurement of Services

28. Workers are the main determinant of productivity.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Medium
Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.
Stevenson - Chapter 02 #28
Topic: 02-08 Factors that Affect Productivity

29. Computer automation will always result in increased productivity.

FALSE

Accessibility: Keyboard Navigation
Difficulty: Medium
Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.
Stevenson - Chapter 02 #29
Topic: 02-08 Factors that Affect Productivity

30. Variability of the output of services makes it more difficult to measure service productivity.

TRUE

Accessibility: Keyboard Navigation
Difficulty: Easy
Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.
Stevenson - Chapter 02 #30
Topic: 02-07 Productivity Measurement of Services

31.

Product variety is an example of:

- A.
- B.
- C.
- D.
- E.**

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #31

Topic: 02-01 Competitiveness

32.

Which of the following is not one of the competitive priorities organizations emphasize as the basis of competing with one-another?

- A.
- B.
- C.**
- D.
- E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #32

Topic: 02-01 Competitiveness

33.

Which of the following is not a key purchasing criterion?

- A.
- B.
- C.
- D.
- E.**

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #33

Topic: 02-01 Competitiveness

34. Characteristics that customers perceive as minimum standards of acceptability are called:

- A.
- B.**
- C.
- D.
- E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-01 List and briefly discuss the primary ways that organizations compete.

Stevenson - Chapter 02 #34

Topic: 02-01 Competitiveness

35. Strategies have a(n) _____ impact on the general direction and basic character of a company.

- A.**
- B.
- C.
- D.
- E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #35

Topic: 02-02 Strategic Planning

36. The shared beliefs of an organization's stakeholders are its:

- A.
- B.
- C.
- D.
- E.**

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #36

Topic: 02-03 Mission, Vision, and Values

37. Of the following, which aspect of strategic planning involves medium or short-term projects to accomplish specific objectives?

- A.
- B.
- C.**
- D.
- E.

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #37

Topic: 02-04 Operations Strategy

38. Which of the following are major decision-making categories for operations policies and action plans?

- I. Facility
- II. Capacity
- III. Process types and technology
- IV. Human Resources

- A.
- B.
- C.
- D.
- E.**

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #38

Topic: 02-04 Operations Strategy

39. Which of the following are steps for formulating an operations strategy?
- I. Link the organizational goals to the operations strategy.
 - II. Define the mission and values of the organization.
 - III. Conduct an audit to determine the strengths/weaknesses of the current operations strategy.
 - IV. Assess the degree of focus at each plant.
- A.
B.
C.
D.
E.

Accessibility: Keyboard Navigation

Difficulty: Hard

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #39

Topic: 02-04 Operations Strategy

40. The generic operations strategy that emphasizes capital-intensive methods to achieve higher labour productivity and lower unit costs is referred to as _____.
- A.
B.
C.
D.
E.

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #40

Topic: 02-04 Operations Strategy

41. Radical process redesign based on process re-orientation, breaking down functional silos and integrating operations into customer-focused processes are tactics associated with what generic operations strategy?

- A.
- B.
- C.
- D.**
- E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #41

Topic: 02-04 Operations Strategy

42. Time-Based strategies do not focus on:

- A.
- B.**
- C.
- D.
- E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-02 Describe a company's strategic planning; mission/vision/values; strategies; and operations strategy; and list the steps involved in formulating an operations strategy.

Stevenson - Chapter 02 #42

Topic: 02-04 Operations Strategy

43. Productivity is expressed as:

- A.
- B.
- C.
- D.**
- E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #43

Topic: 02-05 Productivity

44. A measure of productivity which reflects a combination of some or all of the resources used to obtain a certain output is:
- A.
 - B.
 - C.**
 - D.
 - E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #44

Topic: 02-06 Measuring Productivity

45. Canvalves Company produces cast bronze valves on an assembly line. It currently produces 800 valves each 8-hour shift. If the production is increased to 1,200 valves each shift, the productivity increases by:
- A.**
 - B.
 - C.
 - D.
 - E.

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #45

Topic: 02-06 Measuring Productivity

46. In an assembly operation at a furniture factory, six employees assembled an average of 450 standard dining chairs per 5-day week. What is the labour productivity of this operation?
- A.
 - B.
 - C.**
 - D.
 - E.

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #46

Topic: 02-06 Measuring Productivity

47.

The weekly output of a fabrication process is shown below together with data for labour and material inputs. Standard selling price is \$125 per unit. Overhead is charged weekly at the rate of \$1,500 plus .5 times direct labour cost. Assume a 40-hour week and an hourly wage of \$16. Material cost is \$10 per linear foot. What is the average multifactor productivity?

Week	Output	# Workers
1	392	5
2	408	6

- A.
- B.**
- C.
- D.
- E.

Difficulty: Hard

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #47

Topic: 02-06 Measuring Productivity

48.

Which of the following are not true of productivity measures?

- A.**
- B.
- C.
- D.
- E.

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #48

Topic: 02-06 Measuring Productivity

49.

Which of the following is not a factor that affects productivity?

- A.
- B.
- C.
- D.
- E.**

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #49

Topic: 02-08 Factors that Affect Productivity

50. Which of these factors affects productivity?

- A.
- B.
- C.
- D.
- E.**

Accessibility: Keyboard Navigation

Difficulty: Easy

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #50

Topic: 02-08 Factors that Affect Productivity

51. Which of the following is not a general factor that affects productivity?

- A.
- B.
- C.**
- D.

Accessibility: Keyboard Navigation

Difficulty: Medium

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #51

Topic: 02-08 Factors that Affect Productivity

52.

A company has introduced a process improvement that reduces processing time for each unit, so that output is increased by 25% with less material, but one additional worker required. Under the old process, five workers could produce 60 units per hour. Labour costs are \$12/hour, and material input was previously \$16/unit. For the new process, material is now \$10/unit. Overhead is charged at 1.6 times direct labour cost. Finished units sell for \$31 each. What increase in productivity is associated with the process improvement?

$$\begin{aligned} \text{Before : } & \frac{60(31)}{5(12) + 60(16) + 1.6(5)(12)} = \frac{1}{1} \\ \text{After : } & \frac{60(1.25)(31)}{6(12) + 75(10) + 1.6(6)(12)} = \frac{2.3}{937} \\ \text{Productivity increase} &= \frac{(2.481 - 1.667)}{1.667} \times \end{aligned}$$

Difficulty: Hard

Learning Objective: 02-03 Define and measure the term productivity; describe factors affecting productivity; and explain why measuring the productivity of services is difficult.

Stevenson - Chapter 02 #52

Topic: 02-06 Measuring Productivity

53.

The manager of a carpet store is trying to determine optimal installation crew size. He has tried various crew sizes with the results shown below. Compute the average labour productivity for each crew size. Which crew size do you recommend?

<u>Crew Size</u>	<u>Yards</u>
2	
4	1
3	1
3	1
4	1
2	

<u>Crew Size</u>	<u>Yards Installed</u>	<u>Labor Hours</u>
2	706	34
4	1,308	32
3	1,017	33
3	1,002	33
4	1,288	32
2	692	34
<u>Crew Size</u>	<u>Avg. Labour Productivity</u>	
2	$(353 + 346)/2 = 349.5$	yds/hr
3	$(339 + 334)/2 = 336.5$	yds/hr
4	$(327 + 322)/2 = 324.5$	yds/hr

Recommend optimal crew size = 2

54.

The weekly output of a production process is shown below, together with data for labour and material inputs. The standard inventory value of the output is \$125 per unit. Overhead is charged weekly at the rate of \$1500 plus .5 times direct labour cost. Assume a 40-hour week and an hourly wage of \$16. Material cost is \$10 per running foot. Compute the average multifactor productivity for this process.

Week	Output	# Workers
1	412	6
2	364	5
3	392	5
4	408	6

$$\text{Wk 1: } \frac{412(125)}{6(40)(16) + 2,840(10) + .5(6)(40)(16) + 1,500}$$

$$\text{Wk 2: } \frac{365(125)}{5(40)(16) + 2,550(10) + .5(5)(40)(16) + 1,500}$$

$$\text{Wk 3: } \frac{392(125)}{5(40)(16) + 2,720(10) + .5(5)(40)(16) + 1,500}$$

$$\text{Wk 4: } \frac{408(125)}{6(40)(16) + 2,790(10) + .5(6)(40)(16) + 1,500}$$

$$\text{Avg.} = (1.444 + 1.431 + 1.463 + 1.451)/4 = 5.789$$

Chapter 2 Summary