

MARKETS FOR FACTORS OF PRODUCTION
PRACTICE QUESTIONS

Use the following data to answer the next 4 questions:

The comptroller for Solfan Manufacturing has gathered the following production and sales data:

Weekly Data		
<u>Quantity of Labor</u>	<u>Total Output</u>	<u>Product Price</u>
1	100	\$20
2	190	18
3	270	17
4	340	15
5	390	12
6	420	7

1. L1-00715 LOS5.21.a

Given the data above, the marginal revenue product for the 3rd worker is:

- a. \$1,360
- b. \$1,170
- c. \$270

L1-00718 LOS 5.21.a

Three workers should be employed by the firm if:

- a. The wage scale for workers is less than \$14.63 per hour.
- b. The workers can produce more than 80 units per week.
- c. The workers are willing to work for \$1,170 per week or less.

L1-00716 LOS5.21.a

Given the data above, the marginal product for the 3rd worker is:

- a. 90
- b. 80
- c. 70

L1-00717 LOS5.21.a

The marginal revenue generated by the third worker is approximately:

- a. \$510
- b. \$170
- c. \$15

5. L1-00714 LOS5.21.b

For an individual firm in a perfectly competitive market, the demand for resources will slope downward in the short run because:

- a. The law of diminishing returns causes the marginal product curve to slope downward in the short run.
- b. Both the marginal product and the marginal revenue curves slope downward in the short run.
- c. The demand for the final product slopes downward.

The demand for a resource is defined by the firm's marginal:

- Revenue curve.
- Revenue product curve.
- Cost curve.

7.

L1-00720 LOS5.21.b

XYZ Corporation employs 200 people in the U.S., half making automobile computer assemblies and half making radiator assemblies. The wage rate in Mexico is one-fifth the wage rate in the U.S.

	Marginal Productivity of 100th Worker	
	<u>Computer Assemblies</u>	<u>Radiator Assemblies</u>
United States	6,000	700
Mexico	1,000	500

Based on the foregoing table, XYZ should shift:

- All production to Mexico to take advantage of the lower Mexican wage rates.
- Some computer assembly work to Mexico because the marginal product per unit of wage cost is higher for this product in Mexico than in the U.S.
- Some radiator assembly work to Mexico because the marginal product per unit of wage cost is higher for this product in Mexico than in the U.S.

8.

L1-00723 LOS5.21.f

A firm is considering raising additional capital to finance the expansion of its manufacturing facility in Japan. It is trying to decide whether to raise the money from American investors or Japanese investors. Over the past several years, inflation has been higher in Japan than in the U.S. However, consensus opinion is that Japan will have the lower inflation rate in the future. Furthermore, Japanese citizens tend to have a higher savings rate than U.S. citizens. The GDP of both countries is expected to grow at about the same rate for the next several years. Which market would likely offer the most attractive financing option for the firm?

- U.S. because the lower risk of default would reduce the cost of financing the project.
- Japan because the higher savings rate indicates a greater willingness to defer consumption.
- The U.S. because it has a lower rate of inflation.

9.

L1-00724 LOS5.21.f

A bond analyst is looking at sector spreads (the difference in yields on bonds from different industries). During his research, he noticed that a particular segment of investors tends to move back and forth between the bonds issued by the defense industry and the technology industry depending on their outlook. Following the recent developments in the geopolitical climate, he anticipates the defense industry will most likely expand their production capability in the near future. With all else being equal, which of the following *best* describes the long run impact of this change on the market for technology bonds?

- The end result will be higher interest rates in the technology industry and sector spreads will remain about the same relative to one another.
- The demand for capital will expand in the technology sector, lowering the interest rates on technology bonds and narrowing the technology sector spread.
- The supply of capital in the defense industry will expand, increasing the interest rate and narrowing the defense sector spread.

10.

L1-00722 LOS5.21.f

The total capital supplied and demanded at various rates of return is illustrated in the table below.

<u>Required Return</u>	<u>Quantity Demanded</u>	<u>Quantity Supplied</u>
3%	\$700 billion	\$400 billion
5%	\$600 billion	\$500 billion
7%	\$500 billion	\$600 billion
9%	\$400 billion	\$700 billion

The current equilibrium required return on capital and quantity of capital employed is *closest* to:

- 3% and \$400 billion.
- 4% and \$500 billion.
- 6% and \$550 billion.

11.

L1-00725 LOS5.21.f

A survey of 500 business executives from large and medium capitalization firms provides insight into their expectations about the economic climate over the next 18 months. The results of this survey are shown below.

Responses	Percentage of Respondents
How do you perceive the general economic outlook for the coming 18 months?	
Good	65%
Moderate	20%
Poor	10%
Undecided	5%
Is your company planning to undertake any major projects over the next 18 months?	
Yes	50%
No	20%
Undecided	30%
What do you expect the rate of inflation to be over the next 18 months?	
High	30%
Moderate	50%
Low	15%
Unsure	5%

Based on these results, the *most likely* direction of interest rates over the next 18 months would be:

- Increasing.
- Decreasing.
- Unchanged.