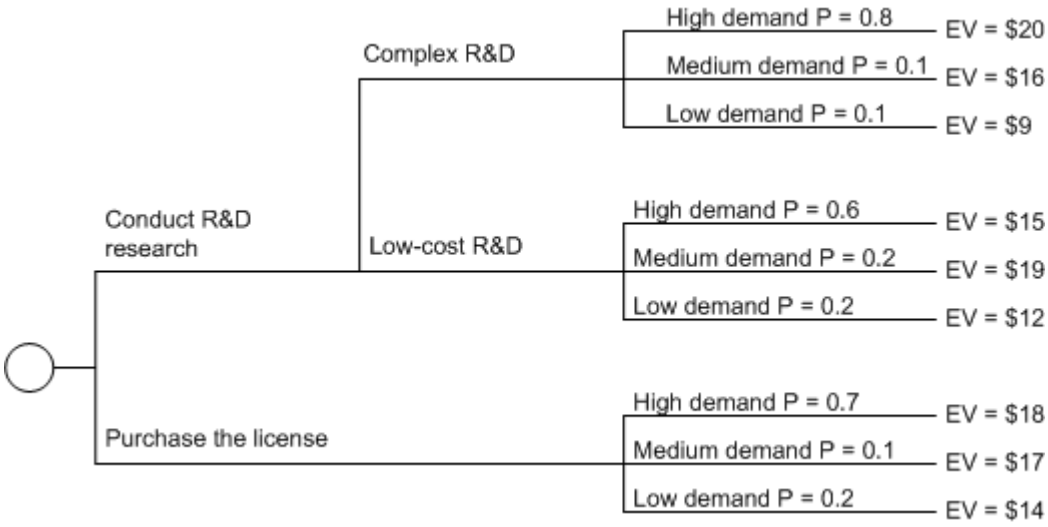
Reshenie Inc. is analyzing the following decision: whether to start an R&D project or purchase a license to produce new types of sensors, the company's major product. If the decision to conduct R&D in-house is made, the company will have two alternatives: conduct a complex R&D project to create a new product or proceed with a low-cost project to improve the characteristics of existing products. Three levels of demand for sensors are considered: high, medium, and low. Expected values of project results (EV) are shown in $ millions.



Applying the decision tree analysis, select the best alternative.

A. Conduct R&D research, as its expected value is $0.65 million higher than the license purchase alternative.

B. Conduct R&D research, as its expected value is $1.4 million higher than the license purchase alternative.

C. Purchase a license, as its expected value is $0.25 million higher than the R&D alternative.

D. Purchase a license, as its expected value is $1.9 million higher than the R&D alternative.

Explanation

Choice "B" is correct. There are two alternatives available: do R&D research or buy the license.

The expected value of the decision to buy the license = ($18 m × 0.7) + ($17 m × 0.1) + ($14 m × 0.2) = $17.1 m.

If R&D research is selected, there are two alternatives available: conduct complex R&D or conduct low-cost R&D.

A complex R&D expected value = ($20 m × 0.8) + ($16 m × 0.1) + ($9 m × 0.1) = $18.5 m.

A low-cost R&D research expected value = ($15 m × 0.6) + ($19 m × 0.2) + ($12 m × 0.2) = $15.2 m.

Since the expected value of complex R&D is higher than the expected value of low-cost R&D, Reshenie's management will choose to conduct complex R&D. Finally, choosing between conducting complex R&D and buying a license, the expected value of conducting complex R&D is $1.4 m higher than the expected value of buying a license ($18.5m − $17.1m).

Choice "A" is incorrect. Based on the decision tree analysis, it is correct to conduct the R&D research; however, the expected value is not $0.65 million higher than the license purchase alternative.

Choice "C" is incorrect. Based on the decision tree analysis, it is not correct to purchase a license. Additionally, the expected value is not $0.25 million higher than the R&D alternative.

Choice "D" is incorrect. Based on the decision tree analysis, it is not correct to purchase a license. Additionally, the expected value is not $1.9 million higher than the R&D alternative.

A company allows its managers to regularly revise the budget whenever they think that circumstances merit a change. Which of the following is *not* a risk for such a policy?

A. Employees may not be motivated to work as hard toward their goals.

B. Employees may be confused due to less-clear operating guidelines.

C. Managers may set the threshold for revisions too low, and changes could occur too frequently.

D. Managers may anticipate changes and not prepare budgets carefully.

Explanation

Choice "B" is correct. Regular revisions usually provide clearer operating guidelines. The other options are all risks of regular revisions.

Choice "A" is incorrect. Employees not motivated to work as hard toward their goals is a risk that comes from allowing managers to regularly revise the budget whenever they think that circumstances merit a change.

Choice "C" is incorrect. Managers setting the threshold for revisions too low and making changes too frequently is a risk that comes from allowing managers to regularly revise the budget whenever they think that circumstances merit a change.

Choice "D" is incorrect. Managers anticipating changes and not preparing budgets carefully is a risk that comes from allowing managers to regularly revise the budget whenever they think that circumstances merit a change.

Novelty Inc. plans to spend $65,000 to launch its newest product. Its research indicates that there is a 10 percent chance for revenue of $40,000, a 60 percent chance for revenue of $80,000, and a 30 percent chance for revenue of $120,000.

However, the company has to revise its estimate after receiving the latest economic forecast. Now it is estimated that there is 50 percent chance for revenue of $40,000, a 40 percent chance for revenue of $80,000, and a 10 percent chance for revenue of $120,000. What would the company decide about introducing (or not introducing) the new product before and after the revision of its estimate?

A. Before revision: introduce product; after revision: do not introduce product.

B. Before revision: do not introduce product; after revision: introduce product.

C. Before revision: do not introduce product; after revision: do not introduce product.

D. Before revision: introduce product; after revision: introduce product.

Explanation

Choice "A" is correct. Before the revision, the expected revenue of Novelty's newest product is $88,000 ($40,000 × 0.1 + $80,000 × 0.6 + $120,000 × 0.3).

Since the cost of launching the product is $65,000, the expected profit from sales of the newest product is $23,000 ($88,000 − $65,000).

After revising its estimate, the expected revenue from sales of the newest product is $64,000 ($40,000 × 0.5 + $80,000 × 0.4 + $120,000 × 0.1).

Since the cost of introducing this product remains at $65,000, the expected profit is now ($1,000), ($64,000 − $65,000).

Based on the calculation, the company should introduce the newest product before the revision (because it has a positive expected profit) and should not introduce the product after the revision (because it has a negative expected profit).

Choice "B" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision not to introduce the product before revision and to introduce the product after revision is incorrect.

Choice "C" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision not to introduce the product before revision and not to introduce the product after revision is incorrect.

Choice "D" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision to introduce the product before revision and to introduce the product after revision is incorrect.

Which one of the following items is the last schedule to be prepared in the normal budget preparation process?

A. Cash budget

B. Cost of goods sold budget

C. Manufacturing overhead budget

D. Selling expense budget

Explanation

Choice "A" is correct. The budget process consists of preparing budgets that stem from the development of an organization's strategic and operational goals. The order in which the budgets are prepared is critical. Many budgets are dependent on the preparation of other budgets.

When preparing a budget, the last schedule to be prepared is the cash budget. Sometimes, pro forma financial statements are prepared after the cash budget, but none of the choices listed are pro forma financial statements. A cash budget provides an estimate of the amount and timing of cash receipts and disbursements at various points over a future period, as well as estimating cash on hand at the end of the period.

Choice "B" is incorrect. The cost of goods sold budget provides the estimated costs of inventory to be sold for a specific period and must be prepared prior to preparing a cash budget.

Choice "C" is incorrect. The overhead budget is one of the earlier budgets prepared, as it stems from the production budget and must be prepared prior to preparing a cash budget.

Choice "D" is incorrect. The selling and administrative budget is one of the earlier budgets prepared and is based on the sales budget and must be prepared prior to preparing a cash budget.

Flexible budgets:

A. Provide for external factors affecting company profitability.

B. Are used to evaluate capacity utilization.

C. Are budgets that project costs based on anticipated future improvements.

D. Set forth changes in activity levels.

Explanation

Choice "D" is correct. Companies have several options from which to choose when selecting a budget system. A flexible budget is prepared at the end of an accounting period to facilitate variance analysis and performance evaluation. A flexible budget can be prepared at any level of production activity or sales activity within the relevant range and sets forth both the actual level of activity (production or sales) and the standard costs allowed for at that level of production or sales. Flexible budgets are not used for capacity evaluation and are not adjusted for anticipated future improvements.

The budgeted amounts for a flexible budget may be adjusted to any activity level. Flexible budgets contain both fixed cost components and variable cost components. The actual activity level is used to create a budget for that level.

Choice "A" is incorrect. Flexible budgets are adjusted based on various factors that influence production and sales, such as labor productivity, materials availability, plant capacity, the strength of the economy, etc. The flexible budget establishes what should be the cost to produce and sell at a specific level of activity and the related effect on operating income. While various "what-if" scenarios can be created based on anticipated internal and external factors as indicated, this answer choice does not reflect the best definition of a flexible budget. Both internal and external factors can be used to create flexible budgets under "what-if" scenarios.

Choice "B" is incorrect. Marginal analysis, not flexible budgets, is used to evaluate capacity utilization.

Choice "C" is incorrect. Any type of budget can anticipate costs based on anticipated future improvements. Flexible budgets are utilized to facilitate variance analysis and performance evaluation and are based on actual levels of activity.

A plan that is created using budgeted revenue and costs but is based on the actual units of output is known as a:

A. Continuous budget.

B. Flexible budget.

C. Static budget.

D. Master budget.

Explanation

Choice "B" is correct. Companies have several options from which to choose when selecting a budget system. The continuous budget is a moving projection of financial operations for a series of weeks, months, or quarters immediately ahead. This form of budgeting uses information from experience to build or renew the budget for the next period and is sometimes referred to as a perpetual budget. A flexible budget is prepared at the end of the accounting period to facilitate variance analysis and can be prepared at any level of production activity or sales activity using an understanding of standard costs within the relevant range. Static budgets are built at one level of activity. A master budget is the most commonly developed budget system. In a master budget, management must prepare several budgets, including a sales budget, production budgets, and a cash budget.

A flexible budget shows estimated revenues and expenses based on different estimated sales volumes, showing different outcomes based on those varying levels of activity. The flexible budget is based on an understanding of the cost structure of the organization. Variable and fixed costs can be deconstructed into more detailed line items based on actual volume of activity to formulate a budget based on actual levels of activity, which can vary from planned levels of activity. A flexible budget considers the actual level of production and/or the actual level of sales as well as the standard costs allowed for that level of production and/or sales.

Choice "A" is incorrect. A continuous (or rolling) budget continues to add an additional period with the passage of the immediately preceding period.

Choice "C" is incorrect. A static budget is based on one level of activity and is not adjusted for the actual level of activity.

Choice "D" is incorrect. A master (comprehensive) budget is the quantification of the company's overall plan and consists of many small budgets.

The probabilities shown in the table below represent the estimate of sales for a new product.

Sales (Units)	Probability
0–100	15%
101–200	45%
201–300	25%
301–400	15%

The sales outcome presented in the table is defined as which one of the following kinds of events?

A. Independent

B. Mutually exclusive

C. Conditional

D. Dependent

Explanation

Choice "B" is correct. Mutually exclusive events are those that cannot occur simultaneously. They are mutually interdependent. The occurrence of one event precludes the occurrence of the others.

Choice "A" is incorrect. The sales outcomes presented in the table would not be defined as independent events.

Choice "C" is incorrect. The sales outcomes presented in the table would not be defined as conditional events.

Choice "D" is incorrect. The sales outcomes presented in the table would not be defined as dependent events.

A company uses a one-year continuous budget system updated on a monthly basis. Actual results from June of Year 4 will most likely impact the continuous budget for:

A. July of Year 4 only.

B. June of Year 5 only.

C. July to December of Year 4 only.

D. July Year 4 to June Year 5.

Explanation

Choice "D" is correct. A continuous (rolling, perpetual) budget is a moving projection of financial operations for a series of weeks, months, or quarters immediately ahead. The continuous budget uses information from the current period experience to build or renew the budget for the next period. For each month or quarter that passes, that same time period one year into the future will replace the period that just ended. For example, if the current budget spans January–December of Year 1, after January Year 1, is over, the new budget time frame will cover February Year 1 to January Year 2. In this manner, the time frame covered by the continuous budget stays the same in terms of length.

Actual results from June of Year 4 can have an impact on the next month as well as on future months. The benefit of the continuous budget is that it constantly adjusts to current information. For a company budget that reflects one year into the future at all times, the information from June of Year 4 can be used to update the budget for each month over the next 12 (July of Year 4 to June of Year 5).

Choice "A" is incorrect. Actual results in one month will likely impact future estimates in more than just the next month.

Choice "B" is incorrect. Only adjusting budgets for the same month one year out incorrectly assumes that current month activity has no impact on the months that follow.

Choice "C" is incorrect. The company's continuous budget covers a one-year period and, as such, the actual results of a given month should be used to inform the budgets for the next 12 months.

Meow Meow Cat Food plans to spend $120,000 to launch its newest product. Its research indicates that there is a 20 percent chance for revenue of $100,000, a 50 percent chance for revenue of $150,000, and a 30 percent chance for revenue of $200,000. However, the company has to revise its probabilities after receiving the latest economic forecast. Now it is estimated that there is a 40 percent chance for revenue of $100,000, a 40 percent chance for revenue of $150,000, and a 20 percent chance for revenue of $200,000. What would be the company's decision regarding the new product before and after the revision of its estimate?

A. Before revision: introduce product; after revision: do not introduce product.

B. Before revision: do not introduce product; after revision: do not introduce product.

C. Before revision: introduce product; after revision: introduce product.

D. Before revision: do not introduce product; after revision: introduce product.

Explanation

Choice "C" is correct. Before the revision, the expected revenue of Meow Meow Cat Food's newest product is $155,000 ($100,000 × 0.2 + $150,000 × 0.5 + $200,000 × 0.3).

Since the cost of launching the product is $120,000, the expected profit of the newest product is $35,000 ($155,000 − $120,000).

After revising its probabilities, the expected revenue of the newest product is now $140,000 ($100,000 × 0.4 + $150,000 × 0.4 + $200,000 × 0.2).

Since the cost of launching this product remains at $120,000, the expected profit is now $20,000 ($140,000 − $120,000).

Based on the calculation, the company could introduce the newest product before the revision or after the revision (because both have a positive expected profit).

Choice "A" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision to introduce the product before revision and not to introduce the product after revision is incorrect.

Choice "B" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision not to introduce the product before revision and not to introduce the product after revision is incorrect.

Choice "D" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision not to introduce the product before revision and to introduce the product after revision is incorrect.

A method of budgeting in which the cost of each program must be justified, starting with the one most vital to the company, is:

A. Zero-based budgeting (ZBB).

B. Continuous budgeting.

C. Flexible budgeting.

D. Incremental budgeting.

Explanation

Choice "A" is correct. ZBB requires that the cost of each item or program in the budget be re-justified with each new budget. ZBB ranks items and programs by how vital they are to the company. The base for each budget line item or program is zero.

Choice "B" is incorrect. Continuous budgeting is not a method of budgeting in which the cost of each program must be justified.

Choice "C" is incorrect. Flexible budgeting is not a method of budgeting in which the cost of each program must be justified.

Choice "D" is incorrect. Incremental budgeting is not a method of budgeting in which the cost of each program must be justified.

Dynamicsub Inc. has developed a new product for spacecraft, which includes the manufacturing of a complex part. The manufacturing of this part requires a high degree of technical skill. Management believes that there is a good opportunity for its technical force to learn and improve as it becomes accustomed to the production process. The production of the first unit requires 10,000 direct labor hours. If an 80 percent learning curve is used, the cumulative direct labor hours required for producing a total of eight units would be:

A. 51,200 hours.

B. 40,960 hours.

C. 64,000 hours.

D. 80,000 hours.

Explanation

Choice "B" is correct. Using a cumulative average-time learning curve, as the cumulative output doubles, the cumulative average direct labor hours per unit becomes the learning curve percentage times the previous cumulative average direct labor hours per unit. So, if the direct labor hours for the first unit are 10,000 and an 80 percent learning curve is used, then the cumulative average direct labor hours for 2 units would be calculated as follows:

Cumulative average direct labor hours for 2 units = 0.8(10,000 direct labor hours) = 8,000 direct labor hours

When output doubles to 4 units, the cumulative average direct labor hours would be calculated as follows:

Cumulative average direct labor hours for 4 units = 0.8(8,000 direct labor hours) = 6,400 direct labor hours

When output doubles again, this time to 8 units, the cumulative average direct labor hours would be calculated as follows:

Cumulative average direct labor hours for 8 units = 0.8(6,400 direct labor hours) = 5,120 direct labor hours

Therefore, the cumulative direct labor hours for 8 units = (5,120 direct labor hours)(8 units) = 40,960 direct labor hours.

Choice "A" is incorrect. This answer was calculated by multiplying 10,000 direct labor hours by 80 percent to get 8,000, the cumulative average direct labor hours for 2 units, and then by 80 percent again to get 6,400, the cumulative average direct labor hours for 4 units. 6,400 was multiplied by 8 units to get 51,200 direct labor hours. However, this answer does not consider the learning curve that occurs during the final doubling in production.

Choice "C" is incorrect. This answer was calculated by multiplying 80,000 direct labor hours by the learning curve of 80 percent. The 80,000 was calculated by multiplying 8 units by 10,000 direct labor hours. However, this answer does not consider the learning curve effect each time production doubles.

Choice "D" is incorrect. This answer was calculated by multiplying 8 units by 10,000 direct labor hours. However, this answer does not consider the learning curve.

A company thinks that its budget process lacks relevance by the middle of the year, even though the process took a great deal of time and expense to complete. Which of the following budget types would help solve both of these issues?

A. Kaizen budgeting

B. Continuous budgeting

C. Zero-based budgeting

D. Activity-based budgeting

Explanation

Choice "B" is correct. A continuous budget adds a new period on the end of the budget at the end of each period, such as a month, so that the budgets remain up to date with the operating environment. A monthly continuous budget also breaks down a large budgeting process into 12 easily manageable steps.

Choice "A" is incorrect. Kaizen budgeting would not improve the relevance of the budget nor reduce the time and expense spent on the budget.

Choice "C" is incorrect. Zero-based budgeting would not improve the relevance of the budget nor reduce the time and expense spent on the budget.

Choice "D" is incorrect. Activity-based budgeting would not improve the relevance of the budget nor reduce the time and expense spent on the budget.

The type of budget that is continually updated to add a new budget period as the most recent budget period is completed is called a(n):

A. Activity-based budget.

B. Flexible budget.

C. Rolling budget.

D. Zero-based budget.

Explanation

Choice "C" is correct. There is no single correct way to prepare a budget, as companies utilize different budget methodologies for different situations. In addition, a methodology used one year may be replaced in the next year with a different methodology that may be more appropriate. A budget is used to set expectations for a given period, with actual results then compared with the budgeted results.

A rolling budget (also called a continuous budget) is a moving projection of financial operations for a series of weeks, months, or quarters immediately ahead. At the conclusion of each period, the portion of the projection then completed is removed, and a new projection for a period of similar length is added to the series.

Choice "A" is incorrect. Activity-based budgeting is an approach to budgeting that involves quantifying activities and processes and forecasting their costs in order that management can achieve strategic goals and improve performance. The budgeting describe in the fact pattern is not activity-based budgeting.

Choice "B" is incorrect. A flexible budget involves establishing a budget based on an understanding of how costs behave. Budgets can be established within the relevant range of activity assuming an understanding of fixed and variable costs. Sales are the driver, and as sales volume changes, flexible budgets can be established using actual activity levels. The budgeting describe in the fact pattern is not flexible budgeting.

Choice "D" is incorrect. Zero-based budgeting represents a budgeting process that requires justification of each expenditure every year. Many budget systems are referred to as incremental budgets because they are constructed assuming that previous budgets represent required levels of effort and are only adjusted based on previous budgets. Zero-based budgets are designed to challenge that assumption and require managers to begin the budget process from zero. The budgeting describe in the fact pattern is not zero-based budgeting.

Which of the following refers to a quantitative expression of proposed management actions for a set period of time?

A. Budgets

B. Cost of goods manufactured statements

C. Cost of goods sold statements

D. Financial statements

Explanation

Choice "A" is correct. A budget is a plan, expressed in financial terms, and is for a set period of time.

Choice "B" is incorrect. Cost of goods manufactured statements are not quantitative expressions of proposed management actions for a set period of time, but are actual results over a period of time.

Choice "C" is incorrect. Cost of goods sold statements are not quantitative expressions of proposed management actions for a set period of time, but are actual results over a period of time.

Choice "D" is incorrect. Financial statements are not quantitative expressions of proposed management actions for a set period of time, but are actual results at a certain time or over a period of time.

Berwick Enterprises uses the percentage-of-sales method to forecast its pro forma financial statements. Based on historical financial statements, the following relationships can be established between several items and sales:

Cost of goods sold (COGS) is 70 percent of sales
Selling and administrative (S&A) expense is 10 percent of sales
Cash and equivalents is 4 percent of sales
Accounts receivable is 20 percent of sales
Inventories are 23 percent of sales
Net fixed assets are 32 percent of sales
Accounts payable is 15 percent of sales
Accruals are 10 percent of sales

Berwick Enterprises is projecting a sales revenue growth of 15 percent in the upcoming year. The company currently has 15,000 shares of common stock outstanding and it plans on maintaining its dividend policy of paying out 35 percent of its net income as dividends. It is currently paying 7 percent interest on its notes payable ($4,000 note) and 10 percent on its long-term debt ($17,500 bond). The company has a 35 percent tax rate.

Based on the above information, assuming current year sales are $100,000, which of the following amounts will be represented as operating income on the upcoming year's pro forma income statement?

A. $23,000

B. $34,500

C. $103,500

D. $20,000

Explanation

Choice "A" is correct. For the current year, sales are $100,000 and the projected growth rate in sales is 15 percent; thus $100,000 × 1.15 = $115,000.

Cost of goods sold is 70 percent of sales; thus $80,500 ($115,000 × 70%) is COGS.

The other operating expense is selling and administrative expenses (10 percent of sales); thus ($11,500).

Operating income (earnings before interest and taxes) is computed as Sales ($115,000) − COGS ($80,500) − S&A expense ($11,500) = $23,000.

Choice "B" is incorrect. This answer represents gross profit for the upcoming year, not operating income.

Choice "C" is incorrect. This answer does not consider cost of goods sold for the upcoming year.

Choice "D" is incorrect. This answer represents operating income for this year, not for the upcoming year.

Which one of the following statements regarding the difference between a flexible budget and a static budget is correct?

A. A flexible budget primarily is prepared for planning purposes while a static budget is prepared for performance evaluation.

B. A flexible budget provides cost allowances for different levels of activity whereas a static budget provides costs for one level of activity.

C. A flexible budget includes only variable costs whereas a static budget includes only fixed costs.

D. A flexible budget is established by operating management while a static budget is determined by top management.

Explanation

Choice "B" is correct. Companies have several options from which to choose when selecting a budget system. A flexible budget is prepared at the end of the accounting period to facilitate variance analysis and performance evaluation. A flexible budget can be prepared at any level of production activity or sales activity using the standard costs allowed for that level of production and/or level of sales within the relevant range. A static budget is prepared before the beginning of the accounting period and is based on the forecasted level of sales and the related forecasted level of production. The static budget is not adjusted for changes in actual activity.

By definition, a flexible budget provides cost allowances (adjustments) for different levels of activity (production and/or sales). A static budget provides costs at one level of forecasted sales and a related forecasted level of production.

Choice "A" is incorrect. Both flexible and static budgets can be used for planning purposes. However, a flexible budget can be adjusted based on actual levels of activity to improve variance analysis to better assess performance.

Choice "C" is incorrect. Both flexible budgets and static budgets include variable and fixed cost components.

Choice "D" is incorrect. Both flexible budgets and static budgets can be prepared by any level of management.

Meow Meow Cat Food plans to spend $120,000 to launch its newest product. Its research indicates that there is a 20 percent chance for revenue of $100,000, a 50 percent chance for revenue of $150,000, and a 30 percent chance for revenue of $200,000. However, the company has to revise its probabilities after receiving the latest economic forecast. Now it is estimated that there is a 40 percent chance for revenue of $100,000, a 40 percent chance for revenue of $150,000, and a 20 percent chance for revenue of $200,000. What would be the company's decision regarding the new product before and after the revision of its estimate?

A. Before revision: introduce product; after revision: do not introduce product.

B. Before revision: do not introduce product; after revision: do not introduce product.

C. Before revision: introduce product; after revision: introduce product.

D. Before revision: do not introduce product; after revision: introduce product.

Explanation

Choice "C" is correct. Before the revision, the expected revenue of Meow Meow Cat Food's newest product is $155,000 ($100,000 × 0.2 + $150,000 × 0.5 + $200,000 × 0.3).

Since the cost of launching the product is $120,000, the expected profit of the newest product is $35,000 ($155,000 − $120,000).

After revising its probabilities, the expected revenue of the newest product is now $140,000 ($100,000 × 0.4 + $150,000 × 0.4 + $200,000 × 0.2).

Since the cost of launching this product remains at $120,000, the expected profit is now $20,000 ($140,000 − $120,000).

Based on the calculation, the company could introduce the newest product before the revision or after the revision (because both have a positive expected profit).

Choice "A" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision to introduce the product before revision and not to introduce the product after revision is incorrect.

Choice "B" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision not to introduce the product before revision and not to introduce the product after revision is incorrect.

Choice "D" is incorrect. Based on the calculation of the expected revenue before and after revision, the decision not to introduce the product before revision and to introduce the product after revision is incorrect.

A firm is in heavy competition with a rival firm, and its rivals are consistently able to effectively respond to changes in consumer preferences by making strategic moves in an effort to win over the buyers and gain competitive advantage. Which of the five forces that affect the competitive environment and profitability of a firm does this best demonstrate?

A. Barriers to entry.

B. Market competitiveness.

C. Existence of substitute products.

D. Bargaining power of customers.

Explanation

Choice "B" is correct. Market competitiveness is often the most significant of the five forces facing a firm. Firms need to be able to anticipate the strategic moves of rival firms. If a firm is in competition with other firms who are able to respond to changes in various components affecting business, the firm faces a strong competitive force of intensity of competition (market competitiveness).

Choice "A" is incorrect. Barriers to entry are "hoops" or other obstacles that a firm must combat when it attempts to enter a new market.

Choice "C" is incorrect. A firm faces heavy competition from substitute products when similar products exist in the marketplace, and consumers are easily able to switch from one product to another.

Choice "D" is incorrect. Bargaining power of the customers relates to the ability of the customer to directly impact the profitability of the firm by increasing the negotiating power of the customer.

When budgets are used for performance evaluation and to set limits on spending, the process will often result in departments adding something "extra" to ensure the budgets will be met. This "extra" is called:

A. Tactical planning.

B. Budgetary slack.

C. Management by objectives.

D. Continuous budgeting.

Explanation

Choice "B" is correct. An extra cushion built into the budget to protect against the unexpected is called budgetary slack. It involves overbudgeting (or padding) expenses and underbudgeting revenues to make the budget targets easier to meet.

Choice "A" is incorrect. The "extra" that departments add to ensure the budgets will be met is not called tactical planning.

Choice "C" is incorrect. The "extra" that departments add to ensure the budgets will be met is not called management by objectives.

Choice "D" is incorrect. The "extra" that departments add to ensure the budgets will be met is not called continuous budgeting.

Which of the following is *not* considered a factor that increases the bargaining power of the customer?

A. Much information is available to the customer to compare and contrast features of all products on the market.

B. One group of customers makes up a large volume of the firm's business.

C. Strategic alliances have been formed with suppliers and other firms.

D. Several alternate suppliers (sellers) of the product exist.

Explanation

Choice "C" is correct. When strategic alliances exist between a supplier and other firms, the bargaining power of the suppliers increases.

Choices "A", "B", and "D" are incorrect because they all are factors that increase the bargaining power of the customer, which are:

- Customers make up a large volume of a firm's business.
- There is much information available to customers.
- The buyers have low switching costs.
- There are a high number of alternate suppliers (sellers) of the product.

Which of the following are the shortcomings of regression analysis?

I. Regression analysis requires the collection of numerous data points to be accurate.

II. The user must evaluate whether the relationship between the dependent and independent variables is reasonable.

III. Regression analysis is limited to the use of one independent variable.

IV. Regression analysis can be strongly influenced by outlying data points.

A. II and IV only

B. I, II, III, and IV

C. I only

D. I, II, and IV only

Explanation

Choice "D" is correct. Regression analysis requires the collection of multiple, representative data points. Multiple regression will incorporate more than one independent variable.

Choice "A" is incorrect. One or more of the statements not selected in this answer is a shortcoming of regression analysis.

Choice "B" is incorrect. One or more of the statements selected in this answer is not a shortcoming of regression analysis.

Choice "C" is incorrect. One or more of the statements not selected in this answer is a shortcoming of regression analysis.

Huron Co. plans to bid on a special project that calls for a total of 24,000 units. The units will be produced in lots with the first lot consisting of 750 units. Based on prior experience, the direct labor time needed per unit of product will be progressively smaller by a constant percentage rate as experience is gained in the manufacturing process. The quantitative method that would *best* estimate Huron's total cost for the project is:

A. Learning curve techniques.

B. Differential calculus.

C. Linear programming.

D. Cost-volume-profit analysis.

Explanation

Choice "A" is correct. Learning curve analysis is a systematic method for estimating costs when a learning process is involved. Calculations for the analysis are based on a learning rate. The learning rate is the rate at which the cumulative average time per lot produced decreases as cumulative output doubles.

Choice "B" is incorrect. Differential calculus is not the quantitative method that would best estimate Huron's total cost when the direct labor time needed per unit of product will be progressively smaller by a constant percentage rate as experience is gained.

Choice "C" is incorrect. Linear programming is not the quantitative method that would best estimate Huron's total cost when the direct labor time needed per unit of product will be progressively smaller by a constant percentage rate as experience is gained.

Choice "D" is incorrect. Cost-volume-profit analysis is not the quantitative method that would best estimate Huron's total cost when the direct labor time needed per unit of product will be progressively smaller by a constant percentage rate as experience is gained.

The table below shows the estimated probabilities of the percentage of defective units resulting from a production run.

Percent Defective	Probability
1%	15%
2%	20%
3%	30%
4%	25%
5%	10%

The expected percent defective is:

A. 1.9%

B. 3.65%

C. 2%

D. 2.95%

Explanation

Choice "D" is correct. Expected value (the mathematical expectation of mean) of a discrete random variable is calculated by taking the sum of the probability of each possible outcome and multiplying it by the outcome.

Mathematically, $E(x) = P(x_1)$ times $x_1 + P(x_2)$ times $x_2 + \ldots + P(x_n)$ times x_n, where:

E(x) = Total expected value

x = Variable representing a possible outcome

p = Probability factor of each possible outcome

n = The number of possible outcomes

In this case, the expected percent defective is 0.15(0.01) + 0.2(0.02) + 0.3(0.03) + 0.25(0.04) + 0.1(0.05) = 0.0015 + 0.004 + 0.009 + 0.01 + 0.005 = 0.0295, or 2.95%.

Choice "A" is incorrect. 1.9% does not represent the expected percent defective calculated by taking the sum of the probability of each possible outcome and multiplying it by the outcome.

Choice "B" is incorrect. 3.65% does not represent the expected percent defective calculated by taking the sum of the probability of each possible outcome and multiplying it by the outcome.

Choice "C" is incorrect. 2% does not represent the expected percent defective calculated by taking the sum of the probability of each possible outcome and multiplying it by the outcome.

Which of the following statements is correct regarding the components of the master budget?

A. The cash budget is used to create the capital budget.

B. Operating budgets are used to create proforma financial statements.

C. The factory overhead budget is used to create the production budget.

D. The cost of goods sold budget is used to create the selling and administrative expense budget.

Explanation

Choice "B" is correct. All of the operating budgets (like the sales budget, production budget, selling and administrative expense budget, etc.) are used to create financial budgets like the cash budget and the proforma financial statements.

Choice "A" is incorrect. The capital budget is used to create the cash budget.

Choice "C" is incorrect. The factory overhead budget is derived from the production budget.

Choice "D" is incorrect. The cost of goods sold budget and the selling and administrative expense budget are completely independent of one another.

Richmond Enterprises is reviewing its policies and procedures in an effort to enhance goal congruence throughout the organization. The processes that are *most* likely to encourage this behavior are:

A. Participatory budgeting, reciprocal cost allocation, and management-by-objective performance evaluation.

B. Reciprocal cost allocation, zero-based budgeting, and standard costing.

C. Cost-based transfer pricing, management-by-objective performance evaluation, and participatory budgeting.

D. Management-by-objective variance analysis, participatory budgeting, and negotiated transfer pricing.

Explanation

Choice "C" is correct. Goal congruence is the agreement or consistency of employee goals with company goals. Goal congruence is essential in an organization because it helps ensure that employees are motivated to follow the organization's policies and procedures.

Cost-based transfer pricing, management-by-objective performance evaluation, and participatory budgeting are likely to encourage goal congruence.

- Cost-based transfer pricing: If the entity uses cost-based transfer pricing, this is likely to enhance goal congruence because all divisions will transfer price at cost (rather than some divisions at cost plus profit or negotiated price, etc.).
- Management-by-objective (MBO) performance evaluation: MBO goals are set by participation, and individual goals are aligned with organizational objectives.
- Participatory budgeting: With participatory budgeting, management and the employee participate in the decision-making process.

Choice "A" is incorrect. Reciprocal cost allocation is unlikely to enhance goal congruence throughout the organization. If a company allocates common costs by weighting the costs of each user as a separate entity, it is using reciprocal cost allocation. This may not enhance goal congruence because managers may see the allocation as unfair.

Choice "B" is incorrect. Reciprocal cost allocation is unlikely to enhance goal congruence throughout the organization. If a company allocates common costs by weighting the costs of each user as a separate entity, it is using reciprocal cost allocation. This may not enhance goal congruence because managers may see the allocation as unfair.

Choice "D" is incorrect. Negotiated transfer pricing is when division managers and senior management negotiate a transfer price that is acceptable to all parties. This might not enhance goal congruence throughout the organization because transfer pricing may be at different amounts among divisions.

In decision making under conditions of uncertainty, expected value refers to the:

A. Present value of alternative actions.

B. Weighted average of probable outcomes of an action.

C. Potential effect of an alternative action.

D. Probability of a given outcome from a proposed action.

Explanation

Choice "B" is correct. Expected value (the mathematical expectation of mean) of a discrete random variable is the sum of the probability of each possible outcome of the trial multiplied by the outcome.

Mathematically, $E(x) = P(x_1) \text{ times } x_1 + P(x_2) \text{ times } x_2 + ... + P(x_n) \text{ times } x_n$, where:

E(x) = Total expected value

x = Variable representing a possible outcome

p = Probability factor of each possible outcome

n = The number of possible outcomes.

Choice "A" is incorrect. Expected value does not refer to the present value of alternative actions.

Choice "C" is incorrect. Expected value does not refer to the potential effect of an alternative action.

Choice "D" is incorrect. Expected value does not refer to the probability of a given outcome from a proposed action.