Olympia Bivalve farms and sells oysters in the Pacific Northwest. The company harvested and sold 7,000 pounds of oysters in July. The company's flexible budget for July appears below:

| Olympia Bivalve Flexible Budget <br> For the Month Ended July 31 |  |
| :---: | :---: |
| Actual pounds (q) | 7,000 |
| Revenue (\$4.20q) | \$29,400 |
| Expenses: |  |
| Packing supplies (\$0.40q) | 2,800 |
| Oyster bed maintenance ( $\$ 3,600$ ) | 3,600 |
| Wages and salaries (\$2,540 + \$0.50q) | 6,040 |
| Shipping (\$0.75q) | 5,250 |
| Utilities (\$1,260) | 1,260 |
| Other (\$510 + \$0.05q) | 860 |
| Total expense | 19,810 |
| Net operating income | \$ 9,590 |

The actual results for July appear below:

| Olympia Bivalve <br> Income Statement <br> For the Month Ended July |  |
| :--- | ---: |
| 31 |  |

## Required:

Compute the company's revenue and spending variances for July. (Input all amounts as positive values. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the "\$" sign in your response.)

10.00 points

Air Meals is a company that prepares in-flight meals for airlines in its kitchen located next to the local airport. The company's planning budget for December appears below:

| Air Meals <br> Planning Budget <br> For the Month Ended December 31 |  |
| :--- | ---: |
| Budgeted meals $(q)$ | 20,000 |
| Revenue $(\$ 3.80 q)$ | $\$ 76,000$ |
| Expenses: |  |
| Raw materials $(\$ 2.30 q)$ | 46,000 |
| Wages and salaries $(\$ 6,400+\$ 0.25 q)$ | 11,400 |
| Utilities $(\$ 2,100+\$ 0.05 q)$ | 3,100 |
| Facility rent $(\$ 3,800)$ | 3,800 |
| Insurance $(\$ 2,600)$ | 2,600 |
| Miscellaneous $(\$ 700+\$ 0.10 q)$ | 2,700 |
| Total expense | 69,600 |
| Net operating income | $\$ 6,400$ |

In December, 21,000 meals were actually served. The company's flexible budget for this level of activity is as follows:

| Air Meals <br> Flexible Budget <br> For the Month Ended December 31 |  |
| :--- | ---: |
| Budgeted meals $(q)$ | 21,000 |
| Revenue $(\$ 3.80 q)$ | $\$ 79,800$ |
| Expenses: |  |
| Raw materials $(\$ 2.30 q)$ | 48,300 |
| Wages and salaries $(\$ 6,400+\$ 0.25 q)$ | 11,650 |
| Utilities $(\$ 2,100+\$ 0.05 q)$ | 3,150 |
| Facility rent $(\$ 3,800)$ | 3,800 |
| Insurance $(\$ 2,600)$ | 2,600 |
| Miscellaneous $(\$ 700+\$ 0.10 q)$ | 2,800 |
| Total expense | 72,300 |
| Net operating income | $\$ 7,500$ |

## Required:

1. Compute the company's activity variances for December. (Input all amounts as positive values. Leave no cells blank - be certain to enter "0" wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the " $\$$ " sign in your response.)


## Download the Applying Excel form and enter formulas in all cells that contain question marks.

For example, in cell B30 enter the formula "= B19".
Notes:

- In the text, variances are always displayed as positive numbers. To accomplish this, you can use the ABS() function in Excel. For example, the formula in cell C31 would be "=ABS(E31-B31)".
- Cells D31 through D39 and G31 through G39 already contain formulas to compute and display whether variances are Favorable or Unfavorable. Do not enter data or formulas into those cells-if you do, you will overwrite these formulas.

After entering formulas in all of the cells that contained question marks, verify that the amounts match the numbers in the example in the text.

Check your worksheet by changing the revenue in cell D4 to $\$ 16.00$; the cost of ingredients in cell D5 to $\$ 6.50$; and the wages and salaries in cell $B 6$ to $\$ 10,000$. The activity variance for net operating income should now be $\$ 850 \mathrm{U}$ and the spending variance for total expenses should be $\$ 410 \mathrm{U}$. If you do not get these answers, find the errors in your worksheet and correct them

Save your completed Applying Excel form to your computer and then upload it here by clicking "Browse." Next, click "Save." You will use this worksheet to answer the questions in Part 2.

## download reference file

ch09_applying_excel_student_form.xis
your response
$\square$
value:
10.00 points

Requirement 2:
Revise the data in your worksheet to reflect the results for the subsequent period as shown below:

|  | A | B | C | D | E |
| :--- | :--- | ---: | :---: | :---: | :---: |
| $\mathbf{1}$ | Chapter 09: Applying Excel |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 | Data |  |  |  |  |
| 4 | Revenue |  |  | $\$ 16.50$ | q |
| 5 | Cost of ingredients | $\$ 10,400$ |  | $\$ 6.25$ | q |
| 6 | Wages and salaries | $\$ 800$ | + | $\$ 0.20$ | q |
| 7 | Utilities | $\$ 2,200$ |  |  |  |
| 8 | Rent | $\$ 600$ | + | $\$ 0.80$ | q |
| 9 | Miscellaneous |  |  |  |  |
| 10 |  | $\$ 29,920$ |  |  |  |
| 11 | Actual results: | $\$ 11,020$ |  |  |  |
| 12 | Revenue | $\$ 10,440$ |  |  |  |
| 13 | Cost of ingredients | $\$ 1,130$ |  |  |  |
| 14 | Wages and salaries | $\$ 2,200$ |  |  |  |
| 15 | Utilities | $\$ 2,055$ |  |  |  |
| 16 | Rent |  |  |  |  |
| 17 | Miscellaneous | 1,700 | meals <br> served |  |  |
| 18 |  | 1,800 | meals <br> served |  |  |
| 19 | Planning budget activity |  |  |  |  |
| 20 | Actual activity |  |  |  |  |
| 21 |  |  |  |  |  |

(a) What is the activity variance for revenue? (Input the amount as a positive value. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the "\$" sign in your response.)

| The amount of the activity variance for revenue | $\$$ | 1650 |
| :--- | :--- | :--- | :--- |
| The activity variance for revenue is: | F |  |

(b) What is the spending variance for the cost of ingredients? (Input the amount as a positive value. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the " $\$$ " sign in your response.)
The amount of the spending variance for the cost of ingredients
The spending variance for the cost of ingredients is:
(c) What is spending variance for wages and salaries? (Input the amount as a positive value. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the " $\$$ " sign in your response.)
The amount of the spending variance for wages and salaries
The spending variance for wages and salaries is:
(d) What is spending variance for total expenses? (Input the amount as a positive value. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the "\$" sign in your response.)
The amount of the spending variance for total expenses
The spending variance for total expenses is:
10.00 points

Icicle Bay Tours operates day tours of coastal glaciers in Alaska on its tour boat the Emerald Glacier. Management has identified two cost drivers-the number of cruises and the number of passengers-that it uses in its budgeting and performance reports. The company publishes a schedule of day cruises that it may supplement with special sailings if there is sufficient demand. Up to 80 passengers can be accommodated on the tour boat. Data concerning the company's cost formulas appear below:

|  | Fixed Cost <br> Per Month | Cost per <br> Cruise | Cost per <br> Passenger |
| :--- | :---: | :---: | :---: |
| Vessel operating costs | $\$ 6,800$ | $\$ 475.00$ | $\$ 3.50$ |
| Advertising | $\$ 2,700$ |  |  |
| Administrative costs | $\$ 5,800$ | $\$ 36.00$ | $\$ 1.80$ |
| Insurance | $\$ 3,600$ |  |  |

For example, vessel operating costs should be $\$ 6,800$ per month plus $\$ 475.00$ per cruise plus $\$ 3.50$ per passenger. The company's sales should average $\$ 28.00$ per passenger. The company's planning budget for August is based on 58 cruises and 3,200 passengers.

## Required:

Complete the company's planning budget for August. (Input all amounts as positive values. Omit the "\$" sign in your response.)

| Icicle Bay Tours <br> Planning Budget <br> For the Month Ended August 31 |  |
| :--- | ---: |
|  | Revenue |
| Expenses: |  |
| Vessel operating costs |  |
| Advertising |  |
| Administrative costs |  |
| Insurance |  |

The KGV Blood Bank, a private charity partly supported by government grants, is located on the Caribbean island of St. Lucia. The blood bank has just finished its operations for September, which was a particularly busy month due to a powerful hurricane that hit neighboring islands causing many injuries. The hurricane largely bypassed St. Lucia, but residents of St. Lucia willingly donated their blood to help people on other islands. As a consequence, the blood bank collected and processed $30 \%$ more blood than had been originally planned for the month.

A report prepared by a government official comparing actual costs to budgeted costs for the blood bank is given below. (The currency on St. Lucia is the East Caribbean dollar.) Continued support from the government depends on the blood bank's ability to demonstrate control over its costs.

| KGV Blood BankCost Control ReportFor the Month Ended September 30 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Planning Budget | Actual Results | Variances |
| Liters of blood collected | 600 | 780 |  |
| Medical supplies | \$ 7,110 | \$ 9,252 | \$2,142 U |
| Lab tests | 8,610 | 10,782 | 2,172 U |
| Equipment depreciation | 1,900 | 2,100 | 200 U |
| Rent | 1,500 | 1,500 | 0 |
| Utilities | 300 | 324 | 24 U |
| Administration | 14,310 | 14,575 | 265 U |
| Total expense | \$33,730 | \$ 38,533 | \$4,803 U |

The managing director of the blood bank was very unhappy with this report, claiming that his costs were higher than expected due to the emergency on the neighboring islands. He also pointed out that the additional costs had been fully covered by payments from grateful recipients on the other islands. The government official who prepared the report countered that all of the figures had been submitted by the blood bank to the government; he was just pointing out that actual costs were a lot higher than promised in the budget.
The following cost formulas were used to construct the planning budget:

|  |  |
| :--- | :---: |
| Medical supplies | $\$ 11.85 q$ |
| Lab tests | $\$ 14.35 q$ |
| Equipment depreciation | $\$ 1,900$ |
| Rent | $\$ 1,500$ |
| Utilities | $\$ 300$ |
| Administration | $\$ 13,200+\$ 1.85 q$ |

## Required:

1. Complete the performance report for September using the flexible budget approach. (Input all amounts as positive values. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the "\$" sign in your response.)

|  | KGV Blood Bank <br> Flexible Budget Performance Report For the Month Ended September 30 Activity Variances |  |  |  |  | Spending Variances |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Medical supplies | \$ | 2133 | U | - | \$ | - | U | V |
| Lab tests |  | 2583 | U | $\checkmark$ |  | 411 | F | $\checkmark$ |
| Equipment depreciation |  | 0 | None | $\checkmark$ |  | 200 | U | $\checkmark$ |
| Rent |  | 0 | None | - |  | 0 | None | $\checkmark$ |
| Utilities |  | 0 | None | $\checkmark$ |  | 24 | U | $\checkmark$ |
| Administration |  | 333 | U | - |  | 68 | F | $\checkmark$ |
| Total expense | \$ | 5049 | U | v | \$ | 246 | F | - |

Mt. Hood Air offers scenic overflights of Mt. Hood and the Columbia River gorge. Data concerning the company's operations in August appear below:

| Mt. Hood Air Operating Data |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Planning | Flexible | Actual |
|  | Budget | Budget | Results |
| Flights (q) | 50 | 52 | 52 |
| Revenue (\$360.00q) | \$18,000 | \$18,720 | \$ 16,980 |
| Expenses: |  |  |  |
| Wages and salaries (\$3,800 + \$92.00q) | 8,400 | 8,584 | 8,540 |
| Fuel (\$34.00q) | 1,700 | 1,768 | 1,930 |
| Airport fees ( $\$ 870+\$ 35.00 q$ ) | 2,620 | 2,690 | 2,690 |
| Aircraft depreciation (\$11.00q) | 550 | 572 | 572 |
| Office expenses (\$230 + \$1.00q) | 280 | 282 | 450 |
| Total expense | 13,550 | 13,896 | 14,182 |
| Net operating income | \$ 4,450 | \$ 4,824 | \$ 2,798 |

The company measures its activity in terms of flights. Customers can buy individual tickets for overflights or hire an entire plane for an overflight at a discount.

## Required:

1. Complete the flexible budget performance report abstract for August. (Input all amounts as positive values. Leave no cells blank - be certain to enter " 0 " wherever required. Indicate the effect of each variance by selecting "F" for favorable, "U" for unfavorable, and "None" for no effect (i.e., zero variance). Omit the "\$" sign in your response.)


Gator Divers is a company that provides diving services such as underwater ship repairs to clients in the Tampa Bay area. The company's planning budget for March appears below:

| Gator Divers <br> Planning Budget <br> For the Month Ended March 31 |  |
| :--- | ---: |
| Budgeted diving-hours $(q)$ | 200 |
| Revenue $(\$ 380.00 q)$ | $\$ 76,000$ |
| Expenses: | 38,000 |
| Wages and salaries $(\$ 12,000+\$ 130.00 q)$ | 1,000 |
| Supplies $(\$ 5.00 q)$ | 7,700 |
| Equipment rental $(\$ 2,500+\$ 26.00 q)$ | 4,200 |
| Insurance $(\$ 4,200)$ | 840 |
| Miscellaneous $(\$ 540+\$ 1.50 q)$ | 51,740 |
| Total expense | $\$ 24,260$ |
| Net operating income |  |

## Required:

During March, the company's activity was actually 190 diving-hours. Complete the flexible budget for that level of activity. (Input all amounts as positive values. Omit the "\$" sign in your response.)

| Gator DiversFlexible BudgetFor the Month Ended March 31 |  |  |
| :---: | :---: | :---: |
| Revenue | \$ | 72200 |
| Expenses: |  |  |
| Wages and salaries |  | 36700 |
| Supplies |  | 950 |
| Equipment rental |  | 7440 |
| Insurance |  | 4200 |
| Miscellaneous |  | 825 |
| Total expense |  | 50115 |
| Net operating income | \$ | 22085 |

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