EXERCISE 9–1 Prepare a Flexible Budget [LO1]

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

Required:

During March, the company's activity was actually 190 diving-hours. Prepare a flexible budget for that level of activity.

EXERCISE 9–2 Prepare a Report Showing Activity Variances [LO2]

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 Planning Budget For the Month Ended December 31	
Budgeted meals (q)	20,000
Revenue (3.80q$)	$76,000
Expenses:	
Raw materials (2.30q$)	46,000
Wages and salaries ($6,400 + 0.25q$)	11,400
Utilities ($2,100 + 0.05q$)	3,100
Facility rent ($3,800)	3,800
Insurance ($2,600)	2,600
Miscellaneous ($700 + 0.10q$)	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 Flexible Budget For the Month Ended December 31	
Budgeted meals (q)	21,000
Revenue (3.80q$)	$79,800
Expenses:	
Raw materials (2.30q$)	48,300
Wages and salaries ($6,400 + 0.25q$)	11,650
Utilities ($2,100 + 0.05q$)	3,150
Facility rent ($3,800)	3,800
Insurance ($2,600)	2,600
Miscellaneous ($700 + 0.10q$)	2,800
Total expense	72,300
Net operating income	$ 7,500

Required:

1. Prepare a report showing the company's activity variances for December.
2. Which of the activity variances should be of concern to management? Explain.

EXERCISE 9–3 Prepare a Report Showing Revenue and Spending Variances [LO3]
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 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 Income Statement For the Month Ended July 31	
Actual pounds	7,000
Revenue	$28,600
Expenses:	
Packing supplies	2,970
Oyster bed maintenance	3,460
Wages and salaries	6,450
Shipping	4,980
Utilities	1,070
Other	1,480
Total expense	20,410
Net operating income	$ 8,190

Required:
Prepare a report showing the company's revenue and spending variances for July.

EXERCISE 9–4 Prepare a Flexible Budget Performance Report [LO4]
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 For the Month Ended August 31	Planning Budget	Flexible Budget	Actual 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 ($870 + 35.00q$)	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. Prepare a flexible budget performance report for August.
2. Which of the variances should be of concern to management? Explain.

EXERCISE 9–5 Prepare a Flexible Budget with More Than One Cost Driver [LO5]

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 per Month	Cost per Cruise	Cost per 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:

Prepare the company's planning budget for August.

PROBLEM 9–20 Activity and Spending Variances [LO1, LO2, LO3]

You have just been hired by SecuriDoor Corporation, the manufacturer of a revolutionary new garage door opening device. The president has asked that you review the company's costing system and "do what you can to help us get better control of our manufacturing overhead costs." You find that the company has never used a flexible budget, and you suggest that preparing such a budget would be an excellent first step in overhead planning and control.

After much effort and analysis, you determined the following cost formulas and gathered the following actual cost data for April:

	Cost Formula	Actual Cost in April
Utilities	$16,500 plus $0.15 per machine-hour	$21,300
Maintenance	$38,600 plus $1.80 per machine-hour	$68,400
Supplies	$0.50 per machine-hour	$9,800
Indirect labor.	$94,300 plus $1.20 per machine-hour	$119,200
Depreciation	$68,000	$69,700

During April, the company worked 18,000 machine-hours and produced 12,000 units. The company had originally planned to work 20,000 machine-hours during April.

Required:

1. Prepare a report showing the activity variances for April. Explain what these variances mean.
2. Prepare a report showing the spending variances for April. Explain what these variances mean.