

The New York Knicks play in the Eastern Division of the National Basketball Association. The team plays in the Madison Square Garden, which has a capacity of 30,000 seats (10,000 in the lower-tier seats and 20,000 in the upper tier seats). All tickets are sold by the reservation.com. The Knicks' budgeted contribution margin for each ticket in 2000 is computed as follows:

	Lower-tier tickets	Upper-tier tickets
Selling price	\$36.00	\$15.00
Garden fee	\$10.00	\$6.00
Reservation Network fee	\$6.00	\$4.00
Contribution margin	\$20.00	\$5.00

The budgeted and actual average attendance figures per game in the 2000 season are:

	Lower-tier tickets	Upper-tier tickets	Total
Budgeted sales	8,000	12,000	20,000
Actual sales	6,600	15,400	22,000

There was no difference between the budgeted and actual contribution margins per lower-tier or upper-tier tickets. This means there was no sales price variance.

The president of the Knicks was delighted that the actual attendance was up 10% above the budgeted figures, though he knew that this was due to a 13 game winning game streak in the middle of the season.

### Questions

- 1 Compute the budgeted and actual total contribution margins for 2000.
- 2 Compute the budgeted and actual average contribution margin per ticket and sales mix percentages.
- 3 Compute the sales volume variance, sales quantity variance and the sales mix variance to explain the difference obtained in question 1.
- 4 "Shark" Samson, a top college draft pick was signed by the Knicks before the 2000 season. His agent wanted performance bonuses for the Shark and offered one of two options: (a) 10.5 cents for every ticket sold or (b) 1% of the total contribution margin. As a manager for the Knicks, what option will you choose based on the budgeted sales figures? Would your choice change if you knew the actual sales figures beforehand? Why does your choice change?

Budget	Commission to the "Shark"				
	Lower-tier	Upper-tier	Average	\$0.105	
Units	8,000	12,000		\$2,100	20,000
Mix percentage	40.00%	60.00%			
Revenue	\$36.00	\$15.00	\$23.40		468,000
Garden Fee	\$10.00	\$6.00	\$7.60		152,000
Reservation Network Fee	\$6.00	\$4.00	\$4.80		96,000
Contribution Margin	\$20.00	\$5.00	\$11.00	\$2,200	\$220,000

Ticket incentive better 1.00%

Actual	Flexible budget as there is no selling price variance				
	Lower-tier	Upper-tier	Average	\$0.105	
Units	6,600	15,400		\$2,310	22,000
Mix percentage	30.00%	70.00%			
Revenue	\$36.00	\$15.00	\$21.30		468,600
Garden Fee	\$10.00	\$6.00	\$7.20		158,400
Reservation Network Fee	\$6.00	\$4.00	\$4.60		101,200
Contribution Margin	\$20.00	\$5.00	\$9.50	\$2,090	\$209,000

Margin incentives better 1.00%

**Sales volume variance**

	Actual Sales Units	-	Budgeted Sales Units	]	×	Budgeted Individual Cont Margin per unit	=	
Lower-tier	6,600	-	8,000	]	×	\$20.00	=	(28,000)
Upper-tier	15,400	-	12,000	]	×	\$5.00	=	17,000
Total	\$209,000	-	\$220,000				=	(11,000)

**Sales quantity variance**

	Actual Total Sales Units	-	Budgeted Total Sales Units	]	×	Budgeted sales mix percent	×	Budgeted Cont Margin per unit	=	
Lower-tier	22,000	-	20,000	]	×	40.00%	×	\$20.00	=	16,000
Upper-tier	22,000	-	20,000	]	×	60.00%	×	\$5.00	=	6,000
[or Total]	22,000	-	20,000	]	×		×	\$11.00	=	22,000

**Sales mix variance**

	Actual sales mix Percentage	-	Budgeted sales mix Percentage	]	×	Actual total volume	×	Budgeted Individual Cont Margin per unit	=	
Lower-tier	30.00%	-	40.00%	]	×	22,000	×	20.00	=	(44,000)
Upper-tier	70.00%	-	60.00%	]	×	22,000	×	5.00	=	11,000
Total	Flexible budget average Contribution margin \$9.50	-	Static Budget average Contribution margin \$11.00	]	×	22,000			=	(33,000)