

Exercise 13-2 (30 minutes)

1. No, production and sale of the racing bikes should not be discontinued. If the racing bikes were discontinued, then the net operating income for the company as a whole would decrease by \$11,000 each quarter:

Lost contribution margin.....			\$(27,000)
Fixed costs that can be avoided:			
Advertising, traceable	\$ 6,000		
Salary of the product line manager	<u>10,000</u>	<u>16,000</u>	
Decrease in net operating income for the company as a whole			<u>\$(11,000)</u>

The depreciation of the special equipment is a sunk cost and is not relevant to the decision. The common costs are allocated and will continue regardless of whether or not the racing bikes are discontinued; thus, they are not relevant to the decision.

Alternative Solution:

		<i>Total If Racing Bikes Are Dropped</i>	<i>Difference: Net Operating Income Increase or (Decrease)</i>
	<i>Current Total</i>		
Sales	\$300,000	\$240,000	\$(60,000)
Variable expenses	<u>120,000</u>	<u>87,000</u>	<u>33,000</u>
Contribution margin	<u>180,000</u>	<u>153,000</u>	<u>(27,000)</u>
Fixed expenses:			
Advertising, traceable	30,000	24,000	6,000
Depreciation on special equipment*	23,000	23,000	0
Salaries of product managers	35,000	25,000	10,000
Common allocated costs	<u>60,000</u>	<u>60,000</u>	<u>0</u>
Total fixed expenses	<u>148,000</u>	<u>132,000</u>	<u>16,000</u>
Net operating income	<u>\$ 32,000</u>	<u>\$ 21,000</u>	<u>\$(11,000)</u>

*Includes pro-rated loss on the special equipment if it is disposed of.

Exercise 13-2 (continued)

2. The segmented report can be improved by eliminating the allocation of the common fixed expenses. Following the format introduced in Chapter 12 for a segmented income statement, a better report would be:

	<i>Total</i>	<i>Dirt Bikes</i>	<i>Mountain Bikes</i>	<i>Racing Bikes</i>
Sales.....	\$300,000	\$90,000	\$150,000	\$60,000
Variable manufacturing and selling expenses.....	<u>120,000</u>	<u>27,000</u>	<u>60,000</u>	<u>33,000</u>
Contribution margin.....	<u>180,000</u>	<u>63,000</u>	<u>90,000</u>	<u>27,000</u>
Traceable fixed expenses:				
Advertising	30,000	10,000	14,000	6,000
Depreciation of special equipment	23,000	6,000	9,000	8,000
Salaries of the product line managers	<u>35,000</u>	<u>12,000</u>	<u>13,000</u>	<u>10,000</u>
Total traceable fixed expenses.....	<u>88,000</u>	<u>28,000</u>	<u>36,000</u>	<u>24,000</u>
Product line segment margin	92,000	<u>\$35,000</u>	<u>\$ 54,000</u>	<u>\$ 3,000</u>
Common fixed expenses	<u>60,000</u>			
Net operating income.....	<u>\$ 32,000</u>			