

The Georgia company is considering a new customer's request for monthly shipments of product Gamma. The new customer is not willing to pay the current selling price for Gamma. Gamma is a specialty product and the new customer is from an industry that Georgia has not served before. So Georgia feels that even if it cuts the price of gamma to the new customer, it can still hold the price with its regular customers. Gamma and beta are the output of a joint process, which uses 10,000 pounds of the raw material Alpha every month. The fixed and variable costs of the joint process per month are given in table 1. The variable costs include the costs of Alpha material and depend only on pounds of Alpha processed.

This joint process leads to two intermediate products - the Beta base and the Gamma base. The bases are processed further and the finished products - Beta and Gamma are obtained. The final amounts of Beta and Gamma obtained, the fixed and variable costs for the separate finishing processes and the final selling price per gallon are given in table 1. The variable costs in each separate finishing process depend only on amount of materials processed in that process. Any amount of Beta can be sold at the current price. The demand for Gamma is fixed at the current volume and price excluding the new customer's demand.

Question 1:

Allocate the total joint costs to the two products: Beta and Gamma by the net realizable value method. Compute the total full cost per gallon for Beta and Gamma.

Question 2:

The president felt that for short term pricing decisions, the variable costing method would give more appropriate figures. Allocate the variable joint costs to the two products: Beta and Gamma by the net realizable value method. Compute the total variable cost per gallon for Beta and Gamma.

Table 1	Joint process	Separate finishing processes	
	Alpha	Beta	Gamma
Units	10,000 lbs	50,000 gallons	20,000 gallons
Variable	\$ 40,000	\$ 60,000	\$ 40,000
Fixed	\$ 5,000	\$ 5,000	\$ 5,000
Total Costs	\$ 45,000	\$ 65,000	\$ 45,000
Revenue		\$ 75,000	\$ 85,000
Net Realizable Value		\$ 10,000	\$ 40,000
Price		\$ 1.50	\$ 4.25

Question 3:

Georgia is planning to produce additional Gamma for the new customer. Note that if Georgia plans to sell some of the current output to the new customer, it has to charge the current price and this is unacceptable to the new customer. Additional amounts of raw material Alpha need to be processed and the fixed costs of none of the processes need be increased. The company has excess capacity. The additional Beta produced can be sold at the current price. What is the minimum price per gallon for Gamma that Georgia will be willing to accept from the new customer? Are the allocated cost per gallon figures obtained in answering questions 1 and 2 of any use?

Question 4:

Ignore the facts under question 3. The processing capacity of the joint process is fixed. After some analysis, Georgia figured out a way of modifying the joint process. Additional fixed costs of \$5,000 will be spent in the joint process and the same amount of raw material Alpha will be processed. With this modification, the output of Beta base will be decreased by 25% and the output of Gamma base will be increased by 25%. The volume of the final products will also be changed appropriately. The fixed costs in the separate finishing processes will remain the same, while the variable costs will change with the volume processed. The new customer will take all the additional Gamma produced. What is the minimum price per gallon for Gamma that Georgia will be willing to accept from the new customer?