

Part A

The Hale paper company is an integrated paper company, making white and kraft papers, paperboard and boxes. The company's divisional managers have been delegated full profit responsibility and complete autonomy to accept or reject transfers to or from other divisions. The company has developed a new type of corrugated boxes CB1, to be made by the Thompson division. The Northern division, which sells kraft displays, has designed a new line of art boxes using the CB1 design. The CB1 plain boxes have a ready competitive market though the prices are not well settled. The CB1 plain boxes will be used by Northern to make the final product - art boxes to be sold to the outside market for \$560 a gross.



The Thompson division wanted to charge the Northern division \$480 a gross, for the CB1 plain boxes. The division had planned to charge \$480 a gross, to its outside customers. Variable costs for the CB1 plain boxes are \$400 a gross in the Thompson division. Northern will incur \$130 gross to convert the plain boxes to art boxes. The CB1 type plain boxes are not available in exactly the same shape, quality and time now. Northern can sell as many as 1,000 gross art boxes of the final product at the \$560 price.

The Northern division manager felt that Thompson should transfer the plain boxes at a lower price than market, because Northern will be unable to make a profit if it has to pay the outsider's price. Further he felt that James Brunner, the manager of the Thompson division was grandstanding as it was not clear that he can sell all his output at \$480 a gross.

Questions

1. Compute Northern's contribution margin if transfers are made at the \$480 price, and the total contribution margin for the company.
2. Assume that Thompson division can sell all its production of the plain boxes in the open market at a price of \$480 a gross. Should Thompson transfer any plain boxes to Northern? - at what price? If any transfers are made, is it good for Hale Paper?
3. Assume Thompson can produce 1,000 gross a month but can sell only 600 gross in the open market at \$480 a gross. The price has to be cut to \$430 by Thompson to sell the full capacity output. Should transfers be made? If so, how many units should be transferred at what price? Submit a schedule showing comparisons of contribution margins under five different alternatives to support your decision. Which alternative is the best for Hale Paper? What range of transfer prices would lead the two divisions to choose the alternative that is the best for the company?
4. Assume Thompson can produce 1,000 gross a month but can sell only 600 gross in the open market at \$480 a gross. The price has to be cut to \$456 to sell the full capacity. Answer the questions under 3.
5. Assume Thompson can produce 1,000 gross a month but can sell only 600 gross in the open market at \$480 a gross. The price has to be cut to \$430 to sell the full capacity. Further Thompson Division will incur a fixed cost of \$50,000 if it produces any CB1 plain boxes at all. If it does not produce any CB1 boxed, then the fixed cost of \$50,000 can be avoided. Answer the questions under 3.
6. Assume Thompson can produce 1,000 gross a month but can sell only 600 gross in the open market at \$480 a gross. The price has to be cut to \$456 to sell the full capacity. Further Thompson Division will incur a fixed cost of \$50,000 if it produces any CB1 plain boxes at all. If it does not produce any CB1 boxed, then the fixed cost of \$50,000 can be avoided. Answer the questions under 3.

Part B

James Brunner, Manager of Thompson Division

If I were to price these boxes any lower than \$480 a thousand, I'd be countermanding my order of last month for our salesmen to stop shaving their bids and to bid full-cost quotations. I've been trying for weeks to improve the quality of our business, and if I turn around now and accept this job at \$430 or \$450 or something less than \$480, I'll be tearing down this program I've been working so hard to build up. The division can't very well show a profit by putting in bids which don't even cover a fair share of overhead costs, let alone give us a profit.

Hale Paper Company was a medium-sized, partly integrated paper company, producing white and kraft papers and paperboard. A portion of its paperboard output was converted into corrugated boxes by the Thompson Division, which also printed and colored the outside surface of the boxes. Including Thompson, the company had four production divisions and a timberland division that supplied part of the company's pulp requirements. For several years each division had been judged independently on the basis of its profit and return on investment. Top management had been working to gain effective results from a policy of decentralizing responsibility and authority for all decisions except those relating to overall company policy. The company's top officials believed that in the past few years the concept of decentralization had been successfully applied and that the company's profits and competitive position had definitely improved.

Early in 1975 the Northern Division designed a special display box for one of its papers in conjunction with the Thompson Division, which was equipped to make the box. Thompson's staff for package design and development spent several months perfecting design production methods, and materials that were to be used. Because of the box's unusual color and shape, these were far from standard. According to an agreement between the two divisions, the Thompson Division was reimbursed by the Northern Division for the cost of its design and development work. When the specifications were all prepared, the Northern Division asked for bids on the corrugated box from the Thompson Division and from two outside companies. Each Hale Paper Company division manager normally was free to buy from whatever supplier he wished; on inter-company sales, divisions selling to other divisions were expected to meet the going market price.

In 1975, the profit margins of converters such as the Thompson Division were being squeezed. Thompson, as did many other similar converters, bought the paperboard and liner board used in making boxes, and its function was to print, cut, and shape the material into boxes*. Although it bought most of its materials from other Hale divisions, most of Thompson's sales were made to outside customers. If Thompson got the order from Northern, it probably would buy its linerboard and corrugating medium from the Southern Division of Hale. Thus, before giving its bid to Northern, Thompson got a quote for materials from the Southern Division. Although Southern had been running below capacity and had excess inventory, it quoted the prevailing market price for materials. Southern's out-of-pocket costs for both liner and corrugating medium were about 60% of its selling price. About 50% of Thompson's out-of-pocket costs of \$400 per thousand boxes represented the cost of linerboard and the corrugating medium.

The Northern Division received bids on the boxes of \$480 per thousand from the Thompson Division, \$372 per thousand from West Paper Company, and \$345 per thousand from Erie Papers, Ltd. West Paper offered to buy from Hale the outside linerboard with the special printing already on it, but it would supply its own inside liner and corrugating medium. The outside liner would be supplied by the Southern Division at a price equivalent to \$90 per thousand boxes, and would be printed for \$30 per thousand by the Thompson Division. Of the \$30, about \$25 would be out-of-pocket costs.

Since the bidding result appeared to be a little unusual, William Kenton, manager of the Northern Division, discussed the wide discrepancy in the bids with Hale's commercial vice president. He told the vice president, "We sell in a very competitive market, where higher costs cannot be passed on. How can we be expected to show a decent profit and return on investment if we have to buy our supplies at more than 10% over the going market?" Knowing that Mr. Brunner had been unable to operate the Thompson Division at capacity on occasion during the past few months, it seemed odd to the vice president that Mr. Brunner would add the full 20% overhead and profit charge to his out-of-pocket costs. When he asked

Mr. Brunner about this, the answer he received was the statement that appears at the beginning of the case. Brunner went on to say that, having done the developmental work on the box and having received no profit on that work, he felt entitled to a good markup on the production of the box itself.

The vice president explored further the cost structures of the various divisions. He remembered a comment of the controller at a meeting the week before, to the effect that costs, which were variable for one division, could be largely fixed for the company as a whole. He knew that in the absence of specific orders from top management Mr. Kenton would accept the lowest bid, which was that of the West Paper Company for \$345. However, it would be possible for top management to order the acceptance of another bid if the situation warranted such action. And although the volume represented by the transactions in question was less than 5% of the volume of any of the divisions involved, future transactions could conceivably raise similar problems.

*The walls of a corrugated box consist of outside and inside sheets of linerboard and a center layer of fluted corrugating medium.

Question

What should the company do?