54. Adler industries is a vertically integrated firm with several divisions that operate as decentralized profit centers. Adler’s Systems Division manufactures scientific instruments and uses the products of two other Adler divisions. The Board Division manufactures printed circuit boards (PCBs). One PCB model is made exclusively for the Systems Division, using proprietary designs, whereas less complex models are sold to outside customers. The products of the Transistor Division are sold in a well-developed competitive market; however, one transistor model is also used by the Systems Division.

The costs per unit of the products used by the Systems Division are as follows:

|  |  |  |
| --- | --- | --- |
|  | PCB | Transistor |
| Direct materials | $2.50 | $0.80 |
| Direct labor | 4.50 | 1.00 |
| Variable overhead | 2.00 | 0.50 |
| Fixed overhead | 0.80 | 0.75 |
| Total cost | $9.80 | $3.05 |

The Board Division sells it commercial products at all full cost plus a 25 percent markup and believes that the proprietary board made for the Systems Division would sell for $12.25 per unit on the open market. The market price of the transistor used by the Systems Division is $3.70 per unit.

Required

1. What would be the impact on the Transistor Division if the per unit transfer price from the Transistor Division to the Systems Division were the full cost of $3.05?
2. Assume that the Systems Division is able to purchase a large quantity of transistors from an outside source at $2.90 per unit. The Transistor Division, having excess capacity, agrees to lower its transfer price to $2.90 per unit. Would this benefit the company as a whole?
3. The Board and Systems Division have negotiated a transfer price of $11.00 per printed circuit board. What is the likely response from each division if this negotiated price is used?