Homework #2

Hrubec Products, Inc., operates a Pulp Division that manufactures wood pulp for use in the production of various paper goods. The Pulp Division has a capacity of 50,000 tons of pulp per year. Revenues and costs associated with a ton of pulp are:

Selling price ……..……		$70
Variable cost…….	$42	
Fixed cost (based on 50,000 tons per year)...	$18	
Profit per ton ……..……		$10

Hrubec Products has just acquired a small company that manufactures paper cartons. This company will be treated as Carton Division of Hrubec. This newly formed Carton Division is currently purchasing 5,000 tons of pulp per year from an outside supplier at a cost of $70 per ton, less a 10% purchase discount (i.e., $63 per ton). Hrubec's president is anxious for the Carton Division to begin purchasing its pulp from the Pulp Division if an acceptable transfer price can be worked out.

Pulp Division is currently selling only 40,000 tons of pulp each year to outside customers at the price of $70 as stated above.

Required:

(a) Are the managers of the Carton and Pulp Divisions likely to agree to a transfer price for 5,000 tons of pulp? Why or Why not? Show necessary calculation.

(b) The headquarters manager of Hrubec Products can force the transfer price at $65 per ton between the Carton Division and Pulp Division. From the standpoint of the entire company, should the Carton Division purchase the 5,000 tons of pulp from Pulp Division at $65 per ton (instead of $63 per ton from the outside supplier)? Show necessary calculation.

(c) If Pulp Division is currently selling 48,000 tons of pulp each year to outside customers at the price of $70. Will the managers of these two divisions agree to a transfer price for 5,000 tons of pulp? Why or Why not? Show necessary calculation.

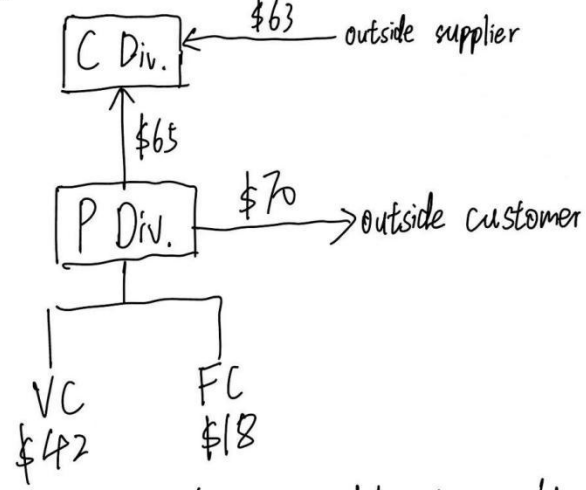
(a)

Transfer price $\geq \$42 + \frac{0}{5,000} = \$42$

Transfer price $\leq \$63$

if the transfer price is between \$42 and \$63, both will agree

(b)



saved cost $= \$63 \times 5,000 - \$42 \times 5,000 = \$105,000 > 0$

Yes.

(c)

$$\text{lowest price} = VC + \frac{\text{lost CM}}{5,000}$$

$$= \$42 + \frac{(\$70 - \$42) \times [5,000 - (30,000 - 48,000)]}{5,000}$$

$$= \$58.8$$

if the transfer price is between \$58.8 and \$63,

both will agree.