

A fixed charge Model

A company is capable of manufacturing shirts, shorts, pants, skirts, and jackets. Each type of clothing requires that the company has the appropriate type of machinery available. The machinery needed to manufacture each type of clothing must be rented at the weekly rates shown in Table. This table also lists the amounts of cloth and labor required per unit of clothing, as well as the selling price and the unit variable cost for each type of clothing. In a given week, 4000 labor hours and 4500 square yards (sq yd) of cloth are available. The company wants to find a solution that maximizes its weekly profit.

	Rental Cost	Labor Hours	Cloth (sq yd)	Selling Price	Unit Variable Cost
Shirts	€1500	2.0	3.0	€35	€20
Shorts	€1200	1.0	2.5	€40	€10
Pants	€1600	6.0	4.0	€65	€25
Skirts	€1500	4.0	4.5	€70	€30
Jackets	€1600	8.0	5.5	€110	€35

Practical Management Science, by Wayne L. Winston, S. Christian Albright, Cengage Learning, 2011

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