Parts list with units and costs (use Excel)
Bills of Material Tree Diagram

Estimate the time that each step would take in an actual process

Production Flow	Units	Name	Mins Needed to Produce / Unit
Product	1	Pen Giftset	
PARTS			
Machine 1	7	Ink Cartridges	10.5
Machine 1	7	Metal Spring	3.5
Machine 1	7	Ballpoint	5
PARTS			
Machine 2	1	Maple Pen Hardwood Shells	1.5
Machine 2	1	Oak Pen Hardwood Shells	1.5
Machine 2	1	Medium Cherry Pen Hardwood Shells	1.5
Machine 2	1	Dark Cherry Pen Hardwood Shells	1.5
Machine 2	1	Walnut Pen Hardwood Shells	1.5
Machine 2	1	Rosewood Pen Hardwood Shells	1.5
Machine 2	1	Mahogany Pen Hardwood Shells	1.5
Machine 2	7	Polished Chrome finish	35
BOX			
Machine 4	1	Maple Presentation Box	20
Machine 4	1	Marquetry Inlay	5
Machine 3	1	Glass Disply Window	17.5
			107
			107 mins for one pen giftset
ASSEMBLY			
WAREHOUSE			