

iPhone Assembling Production¹

One of Apple's production factories in Shenzhen, China is assembling its' iPhone products: iPhone XR, iPhone XS, and iPhone XS Max. The devices are put together via two assembling processes: 1 and 2. Running process 1 for an hour costs \$400 and assembles 300 units of XR, 100 units of XS and 100 units of XS Max. Running process 2 for an hour costs \$100 and yields 100 units of XR and 100 units of XS. To meet customer demands in time for Black Friday in the US, at least 1000 units of XR, 500 units of XS and 300 units of XS Max must be produced daily. Determine the daily production plan that minimizes the cost of meeting Apple's daily demands.

¹ This exercise problem and related solutions were originally developed by Athira Praveen based on Practical Management Science 5th Edition. This current revision was developed by Nowed Patwary.