

Question 4:

County Hospital orders syringes from a hospital supply firm. The hospital expects to use 40,000 per year. The cost to order and have the syringes delivered is \$800. The annual carrying cost is \$1.90 per syringe because of security and theft. The hospital supply firm offers the following quantity discount pricing schedule:

Quantity	Price
0 – 9,999	\$3.40
10,000 – 19,999	3.20
20,000 – 29,999	3.00
30,000 – 39,999	2.80
40,000 – 49,999	2.60
50,000+	2.40

Determine the order size for the hospital.

D 40000 /year
Co \$800
Ch \$1,90 /syringe

Discount level	Quantifying order		Price per box	Q*	Modified Qi*	Total cost
0	0	9.999	3,4	5.804	5.804	\$147.027,24
1	10.000	19.999	3,2	5.804	10.000	\$140.700,00
2	20.000	29.999	3,0	5.804	20.000	\$140.600,00
3	30.000	39.999	2,8	5.804	30.000	\$141.566,67
4	40.000	49.999	2,6	5.804	40.000	\$142.800,00
5	50.000		2,4	5.804	50.000	\$144.140,00

Order size for the hospital: 20.000 syringes