

Operations Management: Practice Problems for AGMP, IIM Ahmedabad

1. A large scale bakery is laying out a new production process for their packaged bread, which it sells to several grocery chains. It takes 12 minutes to bake the bread. How large an oven is required so that the company is able to produce 4000 units of bread per hour (measured in the number of units that can be baked simultaneously)? **Ans: 800 breads**
2. Consider a process consisting of five resources that are operated eight hours per day. The process works on three different products, A, B and C.

Resource	Number of workers	Activity time for A(Min/Unit)	Activity time for B(Min/Unit)	Activity time for C(Min/Unit)
1	2	5	5	5
2	2	3	4	5
3	1	15	0	0
4	1	0	3	3
5	2	6	6	6

Demand for the three different products is as follows: product A, 40 units per day; Product B, 50 units per day; and product C, 60 units per day. What is the bottleneck? **Ans: Bottleneck: Resource 3.**

3. The Jumbo King restaurant processes an average of 5,000 Kg. of waffles per week. The typical inventory of waffle is 2,500 kg. What is the average waffle's flow time of the restaurant? **Ans: 0.5 week**
4. The above restaurant processes, on average, 1,500 customers per day (15 hours). On average, there are 75 customers in the restaurant (waiting to place an order, waiting for the order to arrive, eating *etc.*). How long does an average customer spend at the restaurant? **Ans: 45 minutes**
5. Rotterdam branch office of the New insurance company processes 10,000 claims per year. The average processing time is 3 weeks. Assuming 50 weeks in a year, what is the average number of claims "in process". **Ans: 600 claims**