

Kristen's cookie company essay sample

[Business](#), [Management](#)



1. In order to find the time for filling a rush order, we just need to sum up the amounts of time needed for each task: $6+2+1+9+5+2+1 = 26$ min

2. If we can prepare one order in 26 minutes, it does not mean that it will take 52 minutes to prepare 2 orders. We can start preparing next order while the first one is in process.

26 min 10 min 10 min

If we assume that one order contains 1 dozen of cookies, we can calculate the number of orders by the following formula: $26 + 10(n-1)$

to oven) + 2(packing) + 2(packing) + 1(accepting payment) = 17 min To produce 3 dozen:

$6(\text{wash and mix}) + 2(\text{spooning}) + 1(\text{putting to oven}) + 2(\text{spooning}) + 1(\text{putting to oven}) + 2(\text{spooning}) + 1(\text{putting to oven}) + 2(\text{packing}) + 2(\text{packing}) + 2(\text{packing}) + 1(\text{accepting payment}) = 22$ min

If we assume that the cost of labor hour is \$15 (cost of labor minute = \$0.25), then:

The discount for ordering 2 dozen is \$0.875, or 29%.

The discount for ordering 3 dozen is \$1.17, or 39%.

However, in order to get higher profit we can set lower discount, which still will attract customers.

5. We need food processor only once during the cycle, that is why one is enough. We need baking trays for dishing up the cookies, baking and cooling them. According to our Gantt chart, these tasks are often performed simultaneously, so we need at least 3 trays to manage the process.

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6. In our case the bottleneck is the baking process, because the oven can hold only 1 tray. To expand the production, we can add one more oven. In order to know the effect of adding the oven, we need to know the hourly capacity of tasks before and after:

Washing, mixing, spooning hourly capacity = $60/(6+2) = 7.5$ dozen
Putting and baking hourly capacity (before) = $60/(1+9) = 6$ dozen
Putting and baking hourly capacity (after) = $2*60/(1+9) = 12$ dozen
Cooling hourly capacity = $60/5 = 12$ dozen

Packing and receiving payment = $60/(2+1) = 20$ dozen

Before adding new oven, the task which limited the production process was baking (6 dozen per hour). So, the total capacity was $6*4 = 24$ dozen. After adding new oven the task of washing, mixing, and spooning became the bottleneck.

Effect of adding new oven: hourly capacity increased from 6 to 7.5 dozen; total capacity increased by 6 dozen, or 25%.

I will wish to rent new oven at the price of not more than ($6*Profit$ per dozen), because if it costs more, it will be unprofitable.

Problems for further thought

1. If I do everything without my roommate, I have to do his/her task by myself. My time to produce one dozen will increase from 8 min to 12 min. It will not affect the process, because my and my roommate's tasks do not need to be done simultaneously.

2. According to the Gantt chart, in the case of rush order I do not need to remove the previous dozen of cookies from the oven, which should bake for 9 minutes. I can start this rush order, and it will take 8 minutes to wash, mix and spoon the cookies, so the delay will be at most 1 minute. So it makes no sense to remove the previous dozen of cookies from the oven and start cooking the rush order. We can prepare both orders simultaneously.

However, we may charge some premium for filling the rush orders, because in some situations we might have to delay the previous order for some time. In such cases we can make a discount for the delayed order.

3. In order to promise the exact time of delivery for new order, we should know after what time we will be free to start preparing this order and add 26 minutes to that time. If I have just finished washing, mixing and spooning stage, and the rush order comes, we need to stop cooking the previous order and start the new one, because if we continue to prepare the previous order, the rush order will be delayed for 2 minutes (according to the Gantt chart).

The safety margin for the ordinary order should be $6+2+1+9 = 18$ minutes.

We can fill the first order more quickly, if, for example, we have not started to prepare it yet, and the rush order comes. In this case, the delay will be 10 minutes. But in order to be sure that our customers will not be disappointed of waiting too long, we should allow 18 minutes safety margin.

4. Firstly, we should estimate the demand for our product. After that we can predict whether this business will be profitable or not. Also we can consider our marketing strategy in order to attract more customers. We should set the appropriate price for our product and think about potential discounts. We

should think about the ways to improve our product and service, and the productivity. For example, we can consider delivery of the cookies to our customers, or adding new equipment or labor force to increase the productivity. We should think how to reduce the costs. We might find new suppliers of ingredients with the same quality, but at a lower price. We should make SWOT analysis: analyze all strengths and weaknesses of our business, and further opportunities and potential threats. We should consider our actions in emergency situations.

5. If we sell standard cookies, we can mix the ingredients for 3 dozen of cookies each time. It will reduce my working time. If we prepare cookies in advance, the order-taking process will change, because customers can just come and buy. We can offer several types of cookies and customers will choose what they want. We also can buy more trays and do the first two steps of production in advance and freeze these ready-to-cook cookies. Then it will take 18 minutes to prepare each dozen. In this case, all cookies will be fresh.