Lesson 2-2 Practice Quiz

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June 6, 2016

# Lesson 2-2 Practice Quiz

5/5 points earned (100%)

**Excellent!**

*Correct 1/1 points* 1. The process for checkups at a dentist's office consists of three steps for every patient – check-in, which takes an average of 1 minute, cleaning by one of the three hygienists that work in parallel at the clinic, which takes an average of 24 minutes, and examination by the dentist, which takes an average of 10 minutes. Thus, the average flow rate of the process is 6 patients per hour.

**True**

Correct Response   
The processing times for the three activities are 1, 24, and 10 minutes, respectively. The cycle time for cleaning by one of the three hygienists, who work in parallel, is 24/3 = 8 minutes. With cycle times of 1, 8, and 10 minutes, the largest cycle time is that of the examination by the dentist (10 minutes). Thus, the flow rate of the process is the flow rate of the bottleneck activity (check-up by the dentist) = (1/10) patients per minute, which translates to 6 patients per hour.

False

*Correct 1/1 points* 2. The process for checkups at a dentist's office consists of three steps for every patient – check-in, which takes an average of 1 minute, cleaning by one of the three hygienists that work in parallel at the clinic, which takes an average of 24 minutes, and examination by the dentist, which takes an average of 10 minutes. Thus, the average time that a patient spends at the clinic, assuming no waiting between activities, is 19 minutes.

True

**False**

Correct Response   
The average flow time will be the sum of the processing times of the three activities, which is (1+24+10) = 35 minutes.

*Correct 1/1 points* 3. A recreational vehicle (RV) manufacturer builds 69 RVs a day in an assembly plant that was designed to produce 75 RVs a day. The observed capacity utilization of this plant is 92%.

***True***

Correct Response   
Capacity utilization compares units made against units that can be made (also, time consumed against time available). Thus, capacity utilization for the recreational vehicle (RV) manufacturer is calculated as (69/75 \* 100), which is 92%.

False

*Correct 1/1 points* 4. To reduce the average flow time of a process, it is important to increase capacity utilization of the process.

True

**False**

Correct Response   
An increase in utilization can increase the flow time by increasing wait times within the process. Moreover, such an increase will be more severe for higher levels of variability.

*Correct 1/1 points* 5. An approach to reducing the variability in processing times might include better quality control.

**True**

Correct Response   
Reducing defects, increasing availability of machines, and standardizing activities can help make processing times more reliable and less variable. Moreover, such reduction in variability allows planning for higher degrees of capacity utilization.

False