Module 3 – Practice Solutions

Two-Step Process

TS1.

Capacity of Step B is 15 / (9 + 0.1 x 15) = 1.43 units per minute. Step A makes 1 unit per minute, so the bottleneck is the first step and the capacity of the process is 1.

TS2.

Recommended batch size = 1 x 9 / (1 - 1 x 0.1) = 10

Milk shake production

MSP1.

Total demand = 17.5 gal/hr. Total setup time = 1 hr. Processing time p = 1/30 hr/gal.
Setting capacity = demand and solving for B gives B=42 gal.

MSP2.

42*10/17.5=24

Irish Call Center (ICC)

ICC1.

Answer: Option e.