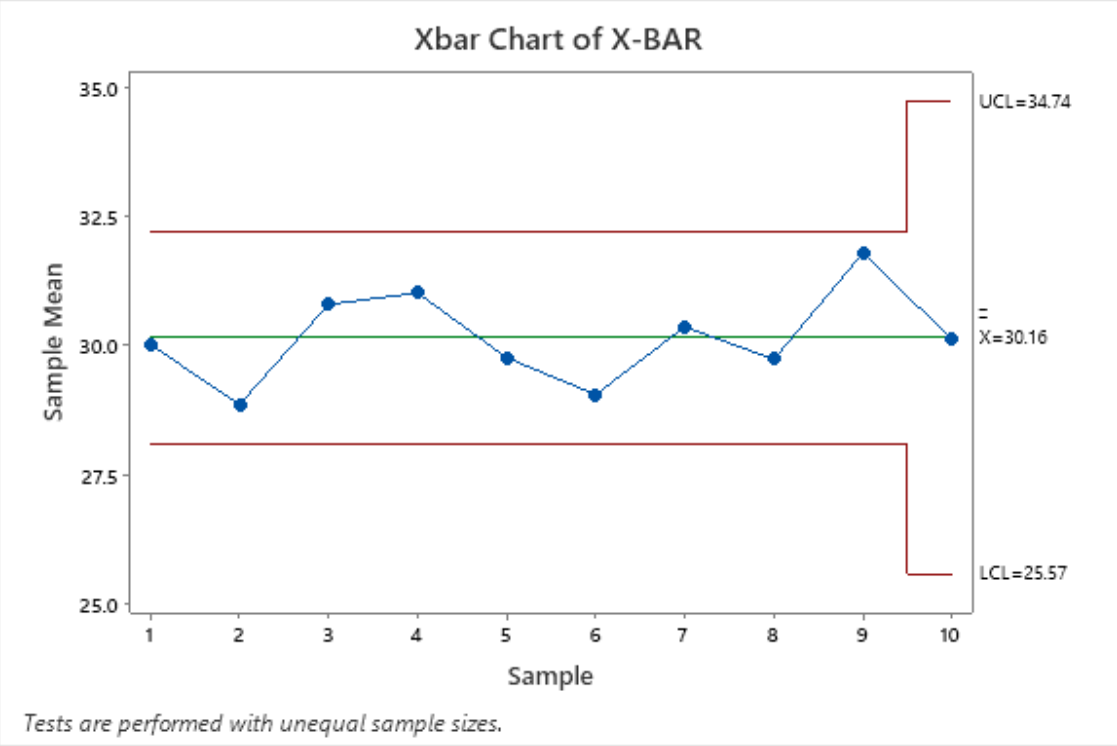
INDIVIDUAL ASSIGNMENT 2: QUALITY ANALYTICS SIMULATION

PJM 6135: PROJECT QUALITY MANAGEMENT

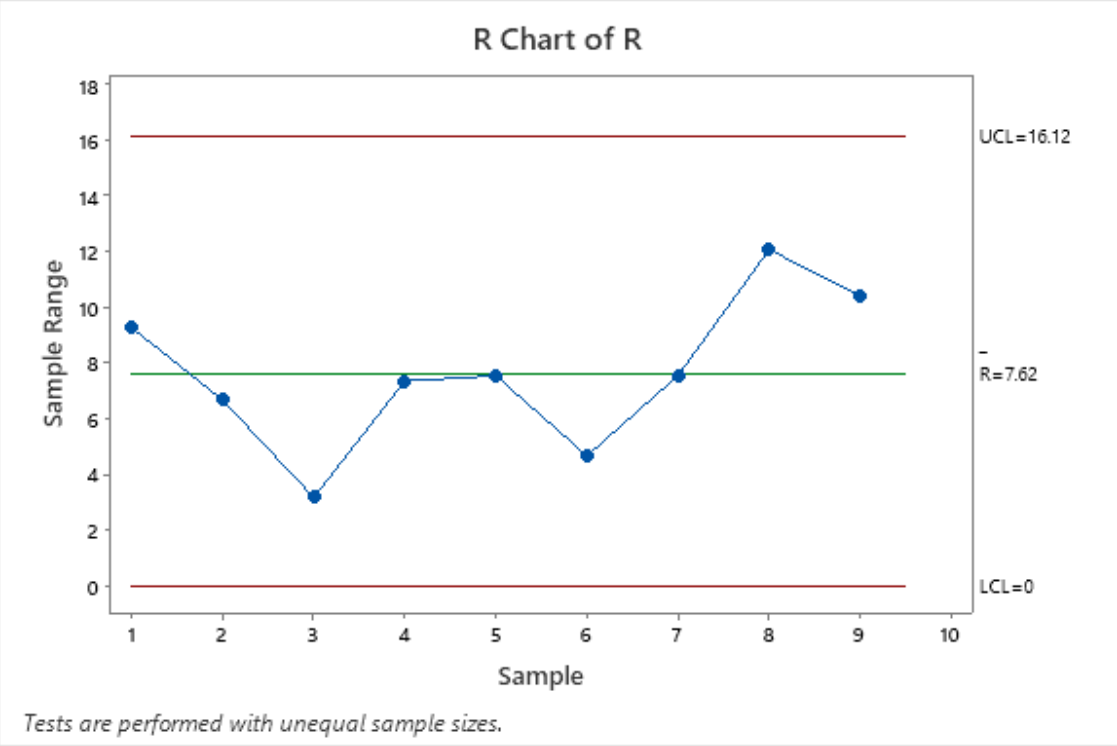
SUBMITTED BY: AABHAS MARU (002955865)

SUBMITTED TO: PROF. SHAHROOZ KAMYAR



X BAR CONTROL LIMIT CHART

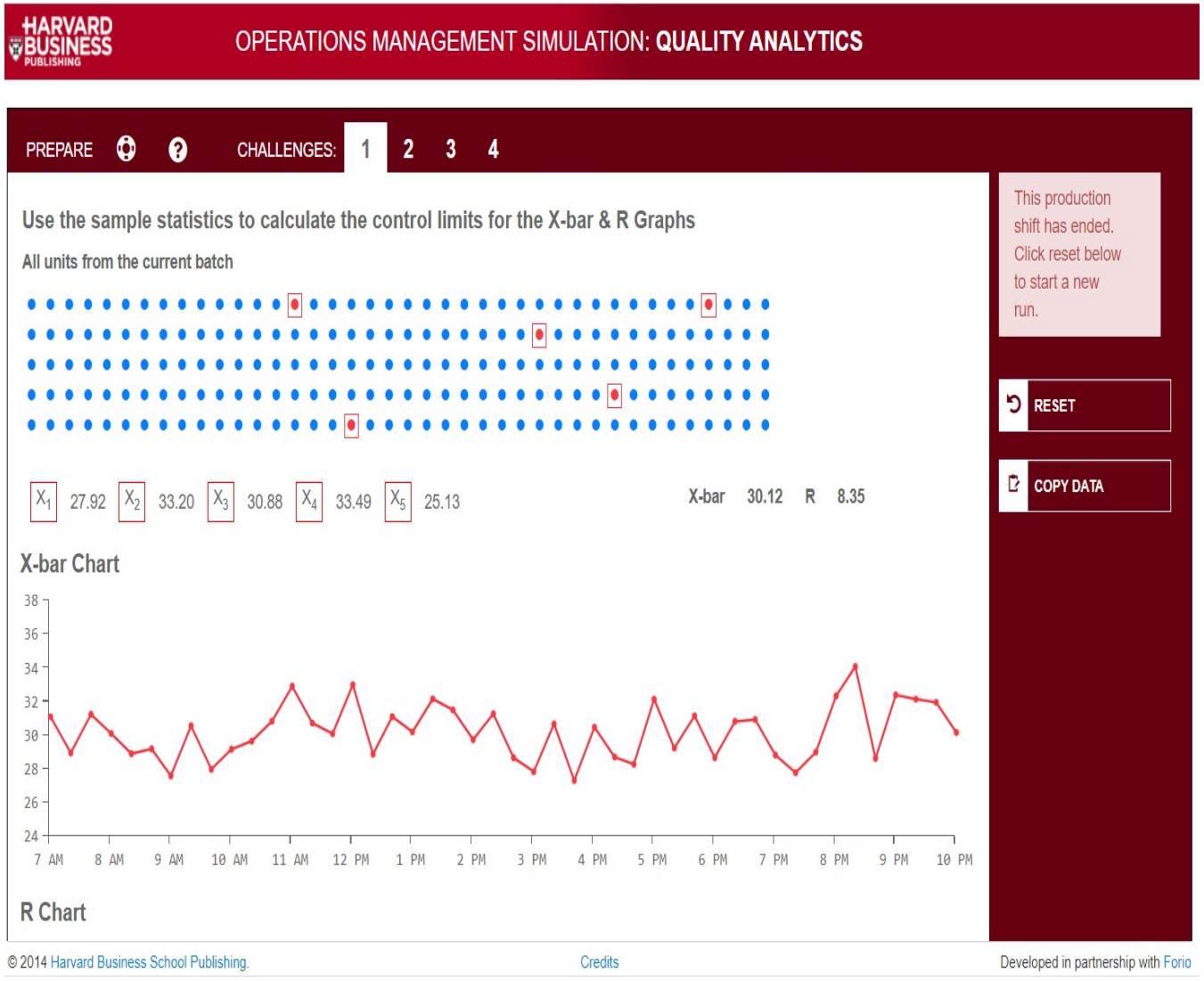
UCL = 34.74
LCL = 24.91
X MEAN =25.57



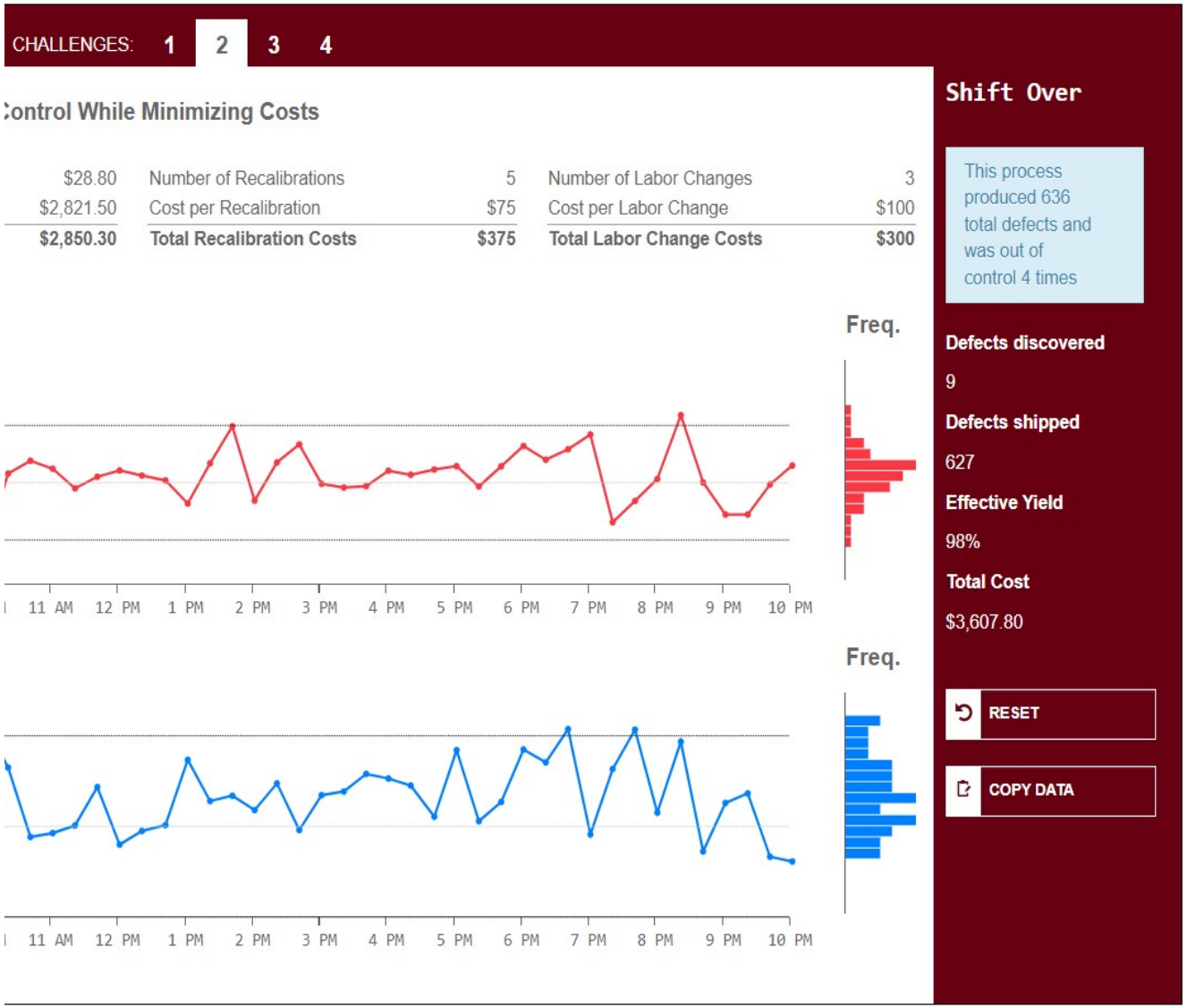
R CONTROL LIMIT CHART

UCL = 16.12 **LCL** = 0

R MEAN = 7.62

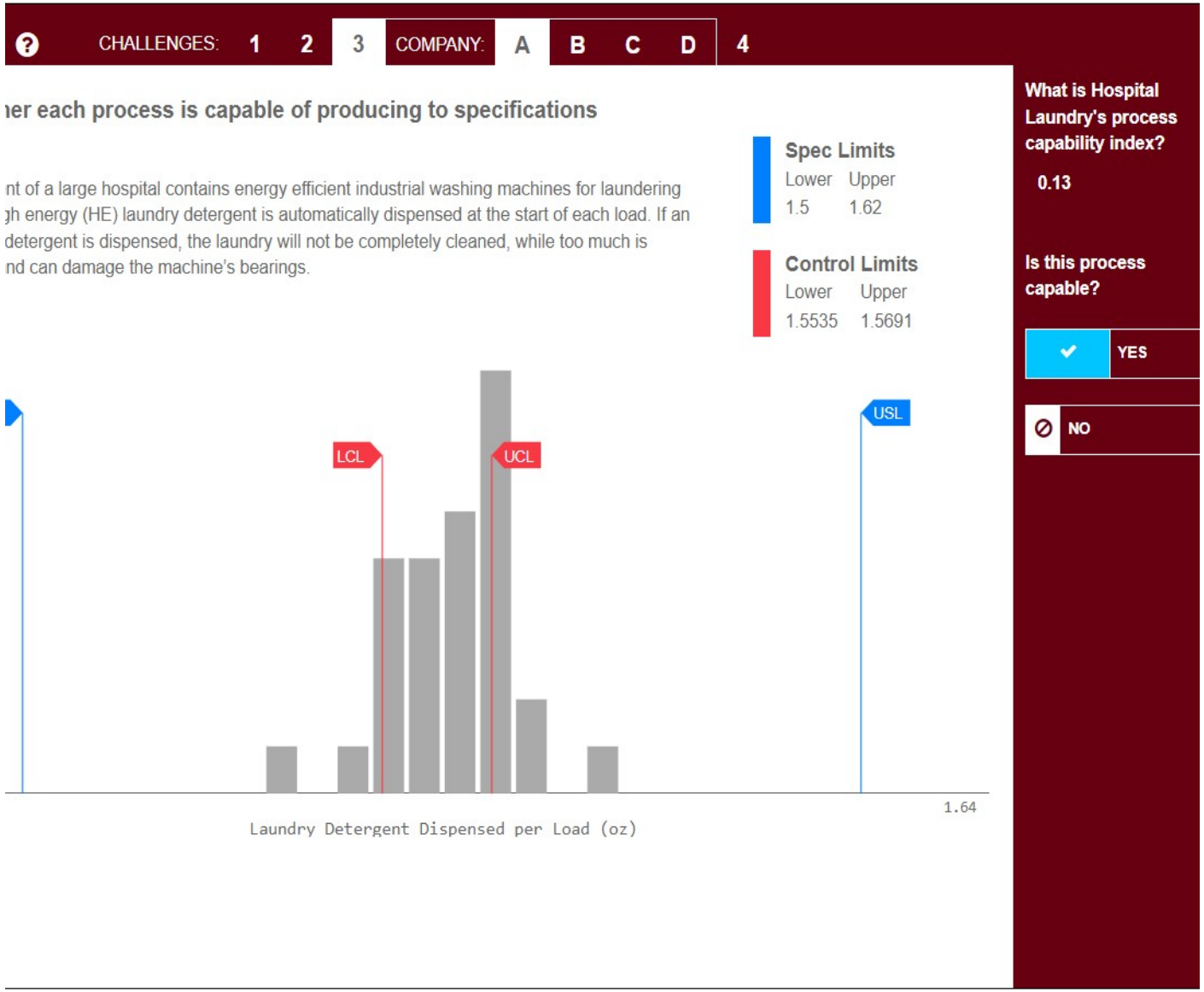


CHALLENGE NUMBER 1



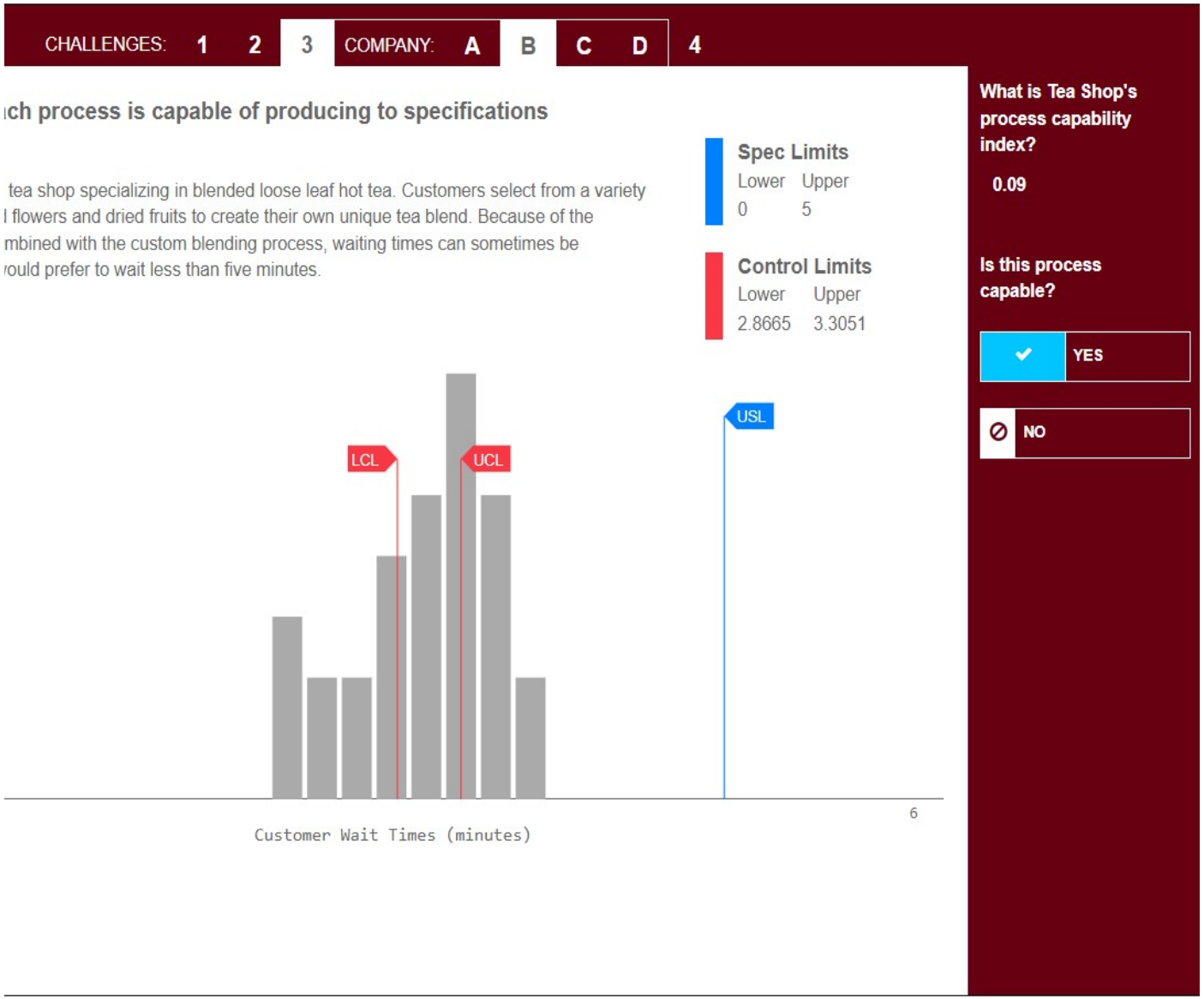
CHALLENGE NUMBER 2:

TO KEEP CONTROL LIMITS WITHIN DESIRED LIMITS FOLLOWING OPTIONS WERE USED: 1) SUBSTITUTION OF THE LABOR
2) RECALIBRATION



CHALLENGE 3A:

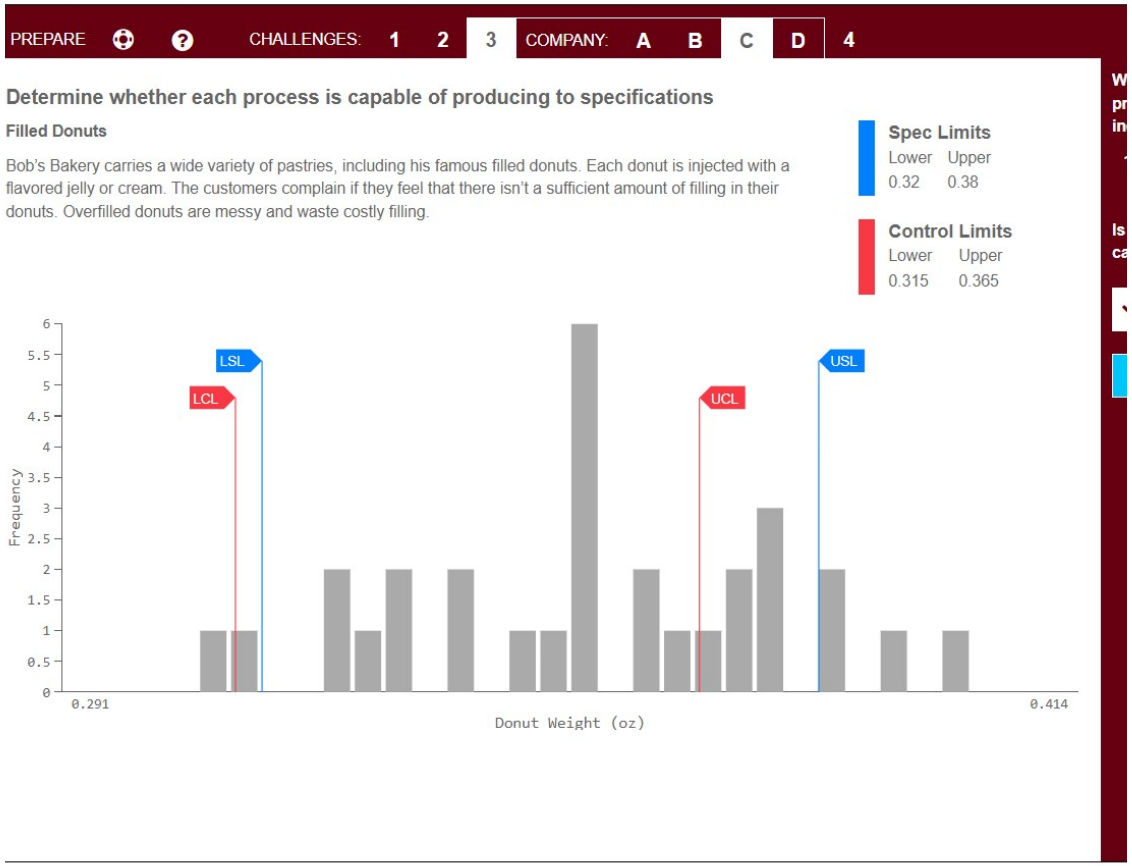
- WHEN THE READINGS FALL WITHIN THE USL AND LSL, THE PROCESS IS SAID TO BE COMPETENT. BY DIVIDING THE DIFFERENCE BETWEEN USL AND LSL BY THE DIFFERENCE BETWEEN UCL AND LCL, THE CAPABILITY INDEX IS CALCULATED.
(1.55691-1.5535)/(1.62- 1.5)= 0.13



CHALLENGE: 3B

LIKE THE LAST EXAMPLE, THE READINGS IN THIS ONE ARE RECORDED IN THE USL AND LSL. SO, THE PROCEDURE IS COMPETENT ALSO IN THIS CASE.

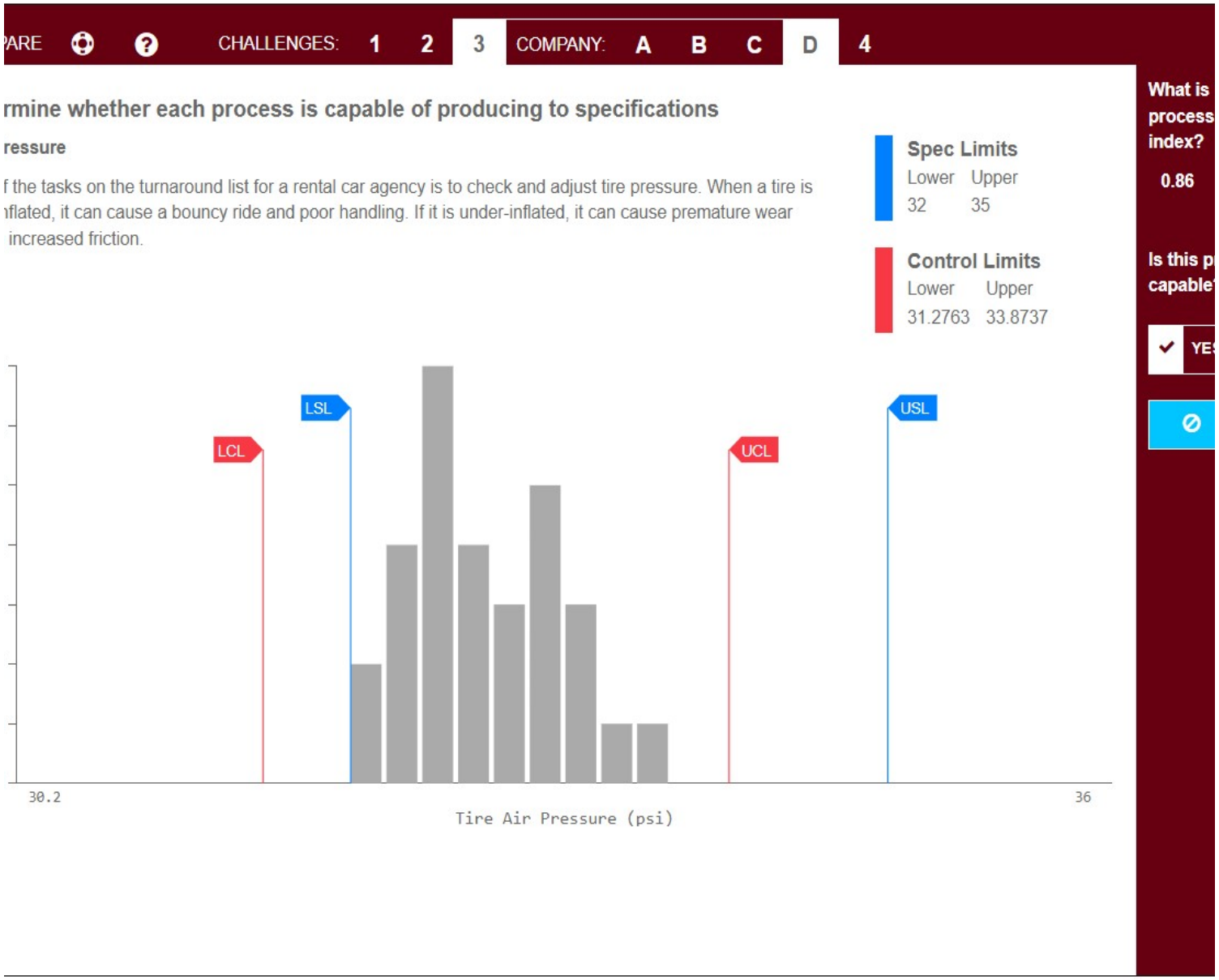
(3.3051-2.8665)/(5- 0)=0.09



CHALLENGE: 3C:

SINCE THE READINGS IN THIS CASE ARE OUTSIDE OF USL AND LSL, IT IS OBVIOUS THAT THE METHOD IS INEFFECTIVE. TO FIND AND ADDRESS THE PROBLEM IN THIS INSTANCE, SOME RECALIBRATION IS NEEDED.

(0.365-0.315)/(0.38- 0.32)=1



CHALLENGE: 3D

THE READINGS DO NOT FALL BETWEEN THE USL AND LSL, JUST LIKE CHALLENGE C. THEREFORE, THE PROCESS CANNOT BE CHARACTERIZED AS A COMPETENT PROCESS EVEN IN THIS INSTANCE.

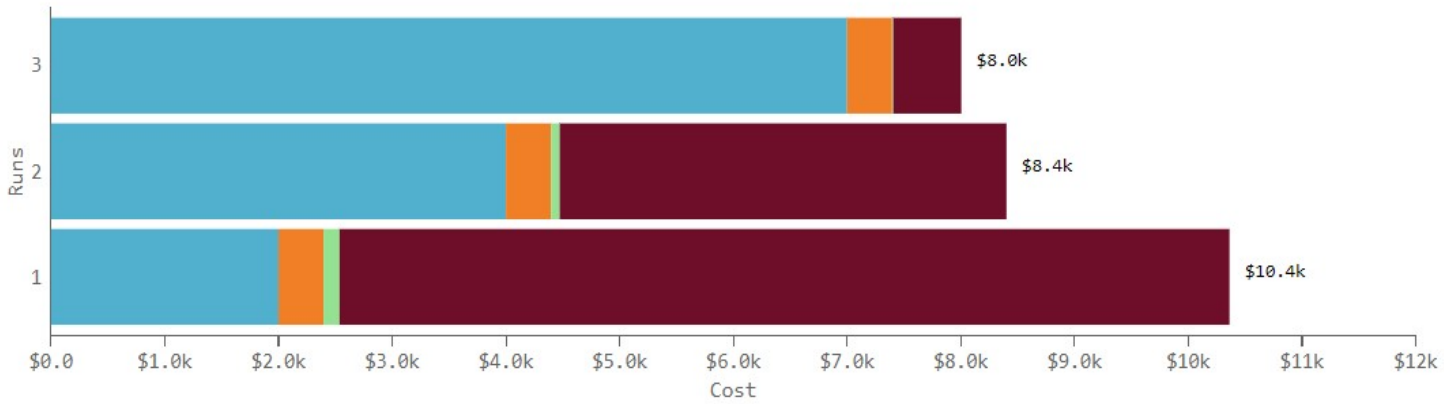
(33.8737- 31.2763)/(35-32)=0.86

PREPARE CHALLENGES: 1 2 3 4

Can certain investments reduce your total cost of quality?

Hospital Lab

Prevention Costs	Appraisal Costs	Internal Failure Costs	External Failure Costs
Labor Training Investment	QA Sampling Rate	Defects Found (QA)	Defects Found (Consumers)
Equipment Investment			Extraordinary Failure Cost
Supplier Cost			



CHALLENGE NUMBER 4