Unit 10 Discussion Example - First Response to a Classmate's Post

First Response: Read a classmate's response. If the process is not in control, choose one or two out-of-control samples and remove from the process. Re-run the data and share the results by stating whether or not the process is now in control. Share the new p-chart.
- If not, how many samples are still outside of the limits?
- If your classmate's process is in control, what happens if you change the number of standard deviations, z, in the formula to a value to less than 3?

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I will review the "Do-It-Al-Display" product. I will look at the 3 samples that have a defective % above the control limit of 39.88%.

| Quality Control			p chart				
Number of samples	10						
Sample size	100						
Data						Results	
	# Defects		% Defects			Total Sample Size	1000
Sample 1	11		11%	Below LCL		Total Defects	266.2358
Sample 2	21		21%			Percentage defects	0.266236
Sample 3	43		43%	Above UCL		Std dev of p-bar	0.044199
Sample 4	9		9%	Below LCL		z value	3
Sample 5	31		31%				
Sample 6	62		62%	Above UCL		Upper Control Limi	39.88%
Sample 7	7		7%	Below LCL		Center Line	26.62%
Sample 8	16		16%			Lower Control Limi	13.36%
Sample 9	45		45%	Above UCL			
Sample 10	21		21%				

Sample 3 has a defective rate of 43%
Sample 6 has a defective rate of 62% (I will take this one out!)
Sample 9 has a defective rate of 45%

After taking out Sample 6, I get the following new quality control limits:

Number of samples	9						
Sample size	100						
Data						Results	
	# Defects		% Defects			Total Sample Size	900
Sample 1	11		0.11			Total Defects	204
Sample 2	21		0.21			Percentage defects	0.226667
Sample 3	43		0.43	Above UCL		Std dev of p-bar	0.041868
Sample 4	9		0.09	Below LCL		z value	3
Sample 5	31		0.31				
Sample 6	7		0.07	Below LCL		Upper Control Limi	0.352269
Sample 7	16		0.16			Center Line	0.226667
Sample 8	45		0.45	Above UCL		Lower Control Limit	0.101064
Sample 9	21		0.21				

p-chart
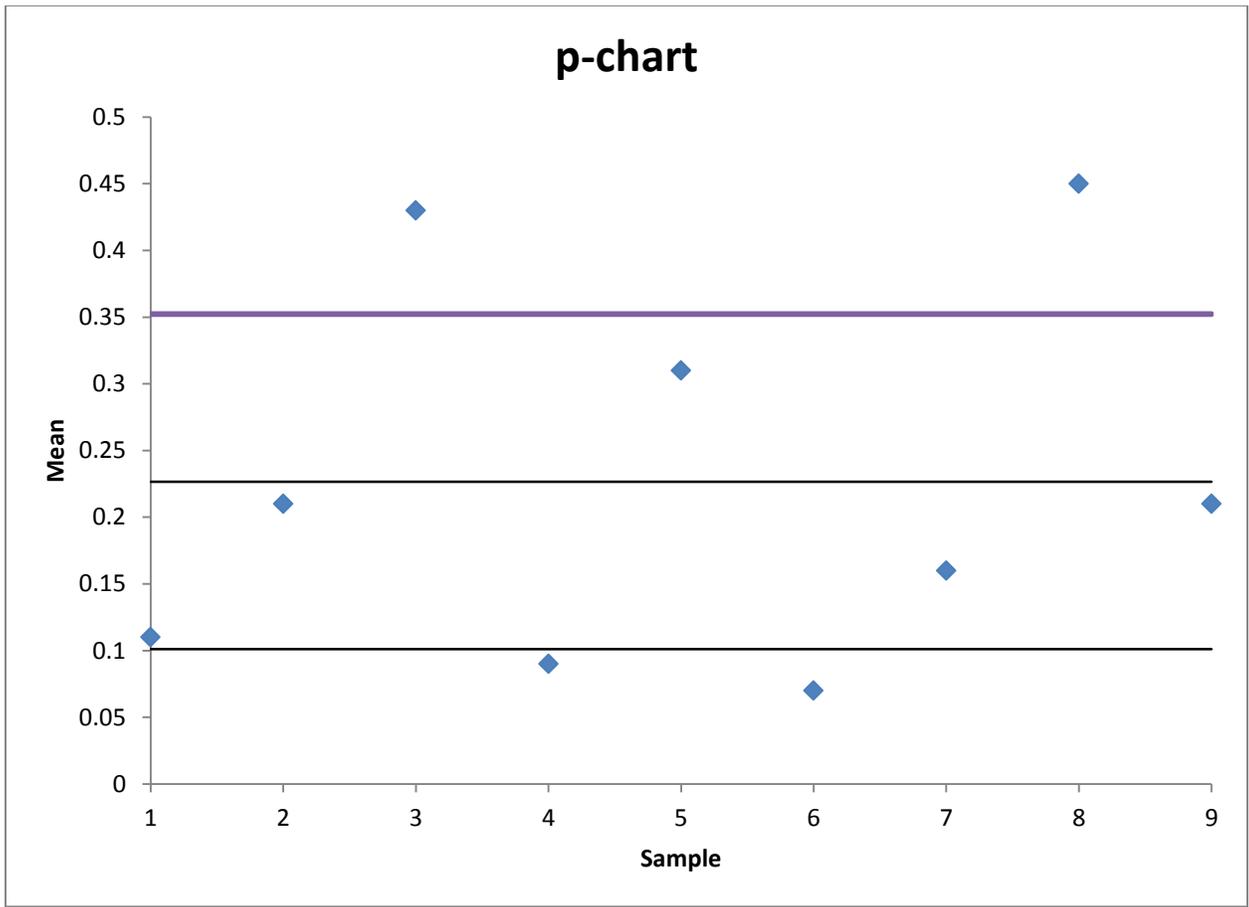
No, the process is still NOT in control. There are still two samples that are above the defective % upper control limit.