Stat 235

Lab 3

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Lab EL12

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October 21, 2018

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1

As λ increases, the distribution shifts to the right, since λ is the mean value of the distribution. We also see that as this distibution shifts to the right, the curve flattens as a result of the mean probability decreasing while the spread increases. Since Poisson distributions measure the number of successes in an interval, and in this case a "success" is a flaw in a plastic panel, we can clearly see that as λ increases, the number of flaws in the plastic panels also increase.

2

2.a

Assuming $\lambda = 0.5$, the probability that there are no flaws in a randomly selected panel is $P(X = 0)$. Using the *Poisson Probabilities* worksheet, we find this number to be 0.6065, or 60.65% of the panels are in perfect condition

2.b

2.c

3

3.a

3.b

4

4.a

4.b

4.c

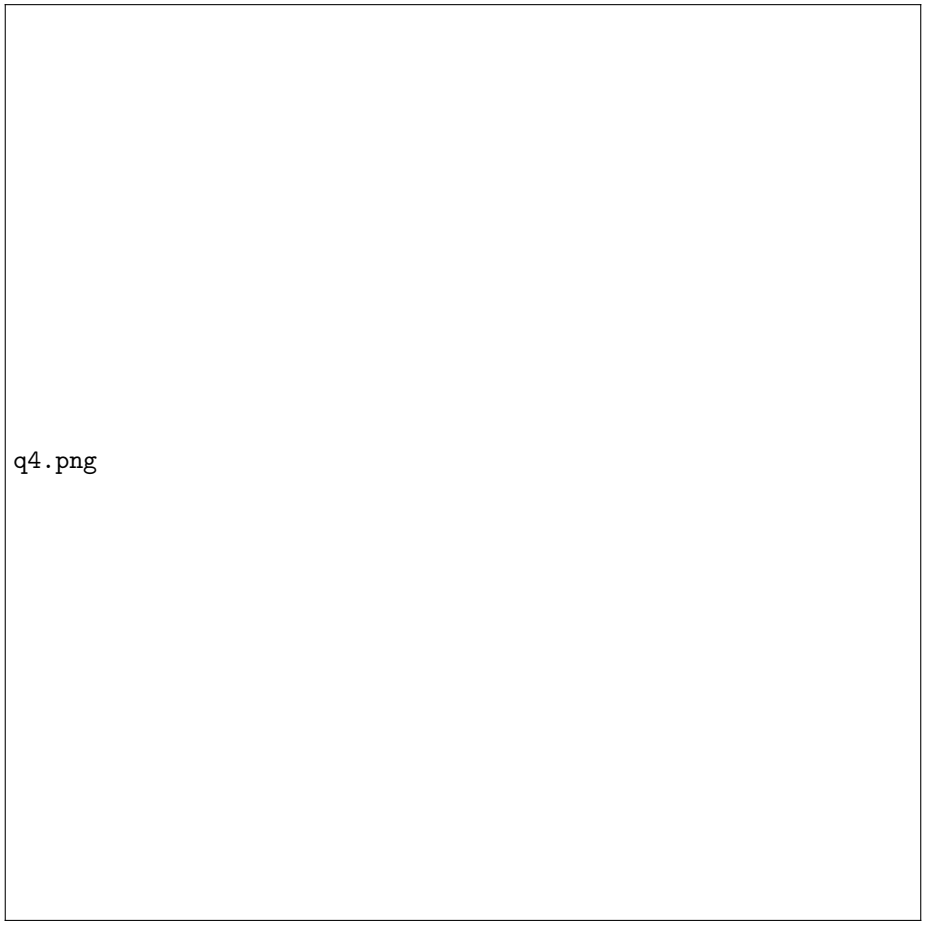

Figure 1: INSERT CAPTION HERE

4.d

5

5.a

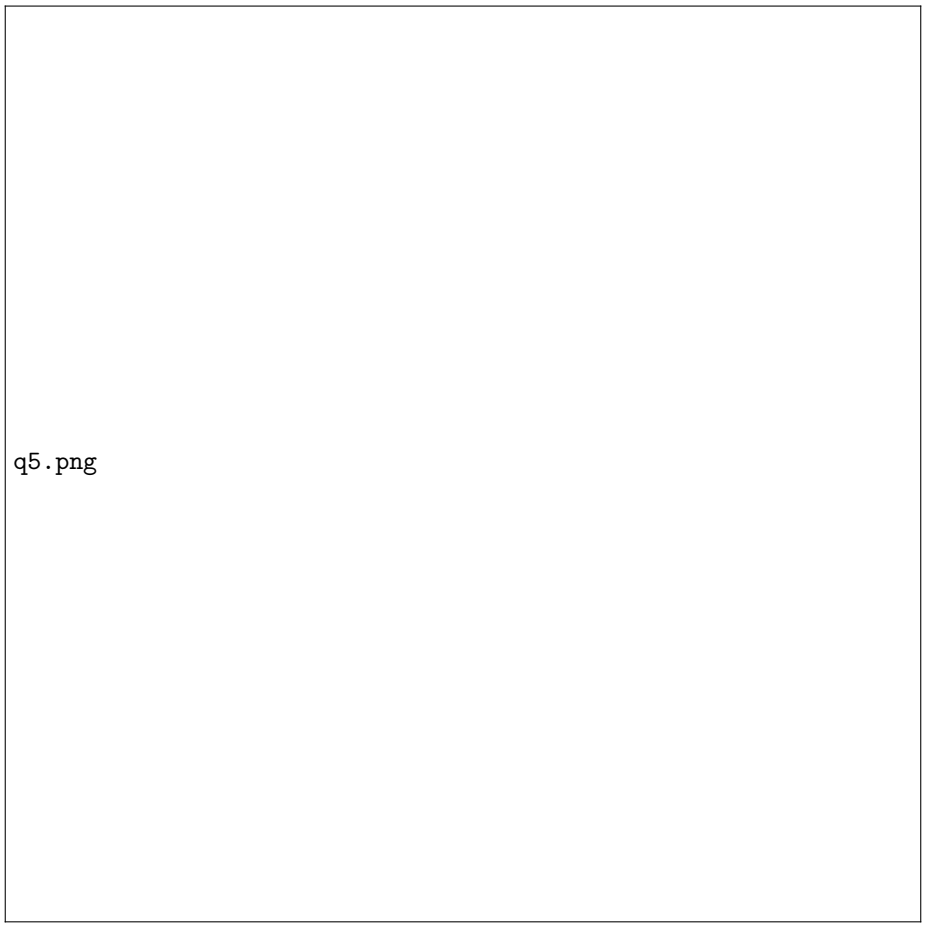

Figure 2: INSERT CAPTION HERE

5.b