**Chapter 4.5 Excel Instructions Continued**

**Compute Binomial Probabilities**

Open the **Distributions.xlsx** file on **CANVAS**

1. In Cell B5, Type the formula: “=BINOM.DIST(A5, $D$1,$D$2,FALSE)”
   1. Use the fill handle to drag down and fill the rest of column B.
2. In Cell C5, type the formula: “=BINOM.DIST(A5, $D$1,$D$2,TRUE)”
   1. Use the fill handle to drag down and fill the rest of column C.

**What does the value of 0.973 mean?**

**Compute Poisson Probabilities**

Click on the **Poisson Tab** at the bottom of **Distributions.xlsx** file.

1. In Cell B4, Type the formula: =POISSON.DIST(A4,$D$1,FALSE)”
   1. Use the fill handle to drag down and fill the rest of column B.
2. In Cell C5, type the formula: “=BINOM.DIST(A5, $D$1,$D$2,TRUE)”
   1. Use the fill handle to drag down and fill the rest of column C.

**What is the probability that 0 patients arrive during a 15 minute interval?**

**What is the probability that exactly 8 patients arrive during a 15 minute interval?**

**What is the probability that 8 or fewer patients arrive in a 15-min interval?**

**Compute Normal Probabilities**

Click on the **Normal Tab** at the bottom of **Distributions.xlsx** file.

1. In Cell B5, type the formula: =NORM.DIST(A4,$B$1,TRUE)”
2. In Cell B6, type the formula: “=1-B5”
3. In Cell B8, type the formula: “=NORM.INV(0.1, $B$1, $B$2)”

**How many hours should Grear guarantee to ensure that only 10% of the aircraft engines will be eligible for the guarantee?**

1. In Cell B10, type the formula: “=NORM.DIST(40000,$B$1,$B$2, TRUE) - NORM.DIST(30000, $B$1, $B$2, TRUE)”

**What is the probability that an engine will have greater than 30,000 hours but less than 40,000?**

**Compute Exponential Probabilities**

Click on the **Exponential Tab** at the bottom of **Distributions.xlsx** file.

1. In Cell B3, type the formula: “= EXPON.DIST(18, 1/$B$1, TRUE)
2. In Cell B4, type the formula: “= EXPON.DIST(6, 1/$B$1, TRUE)”
3. In Cell B5, type the formula: “=B3 – B4”

**What is the probability that the time between two business loan defaults is between 6 and 18 months?**