**Worksheet: Using EXCEL to calculate probabilities for the normal distribution**

Use the following function to obtain the probability of observing a value less than or equal to ‘value’:

***NORM.DIST(value, mean, SD, TRUE)***

For example, let us assume we have a distribution with mean =3.4 and SD=0.57 and want to work out the following probabilities:

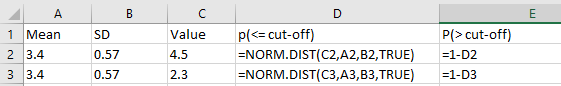
P( X > 4.5)

P( X <= 2.3)

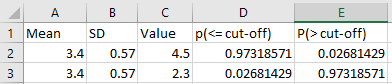
P( X > 2.3)

P(X between 2.3 and 4.5)

To obtain these in EXCEL we input the following data:



And here’s what EXCEL displays:



Thus:

P(> 4.5) = 0.0268

P(<= 2.3) = 0.0.0268

P(> 2.3) = 0.9732

P(between 2.3 and 4.5) = 0.9732 – 0.0268 = 0.9464