

Sheet1

By combining the @INTG and @GAUSS functions, AS-EASY-AS may be used to calculate the area under a normal curve. @GAUSS returns the value of the Gaussian (or Normal) distribution function at the point X. @INTG can be used to evaluate the integral of the function with the limits X0 and X1. Refer to the AS-EASY-AS User Manual for the proper syntax.

mean of distribution
standard deviation
First value (X0)
Last value (X1)
Answer

Problem A. A type of storage battery lasts on the average 3.0 years, with a standard deviation of 0.5 year. Assuming the battery lives are normally distributed, find the probability that a given battery will last less than 2.3 years.

The answer is given in cell D12. Cells D8 and D9 represent the mean and standard deviation. The area of interest is between 0 and 2.3 years, and have been entered as X0 and X1 in cells D10 and D11.

mean of distribution
standard deviation
First value (X0)
Last value (X1)
Answer

Problem B. A light bulb has a lifetime that is normally distributed with mean equal to 800 hours and a standard deviation of 40 hours. What is the probability that a bulb burns between 778 and 834 hours?

The answer is given in cell D28. Cells D24 and D25 represent the mean and standard deviation. The area of interest is between 778 and 834 hours, and has been entered as X0 and X1 in cells D26 and D27.

Problem A

3

0.50

0

2.30

#NAME? <-@INTG("@gauss(@x,D8,D9)",D10,D11)

Problem B

800

40

778

834

#NAME? <-@INTG("@gauss(@x,D24,D25)",D26,D27)

AS-EASY-AS for Win95
Sample Worksheet
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