CP675

Normal Probabilities Using Solve

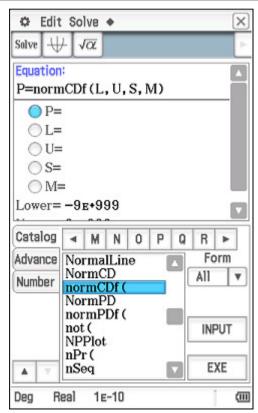
We will create an eActivity containing a NumSolve strip which can be used to calculate any of the parameters involved in a normal probability question.

Start a new eActivity and tap Insert, Strip(2), NumSolve.

File Edit Insert Action Calculation Row Text Row Geometry Link Strip(1) Strip Conics Graph Conics Editor DiffEqGraph DiffEqGraph Editor Financial Probability NumSolve Sequence Editor Verify Picture Plot Alg Standard Real Deg $\overline{}$

Enter the equation shown, using the catalog or abc keyboard.

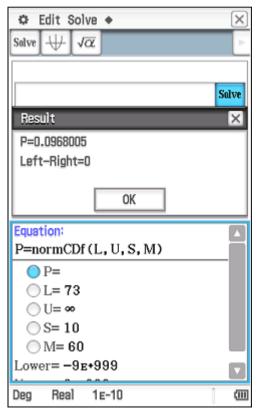
Working with the normCDF function in this way allows the user to solve for any of the 5 variables involved.



Example 1. If $X \sim N(60, 10^2)$ determine P(X > 73).

the button next to P.

Tap solve.

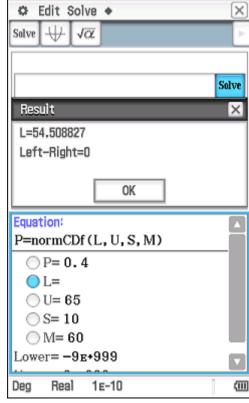


Example 2. If $X \sim N(60.10^2)$ and P(a < X < 65) = 0.4, find a.

Enter the required parameters and select

Enter the required parameters and select the button next to L.

Tap solve.



Example 3. If $X \sim N(m, 10^2)$ and P(X < 60) = 0.6, find m.

Enter the required parameters, select the button next to **M** and tap **solve**.

An optional step is to add strip help.

(Sometimes entering an estimate such as M = 50 is useful before trying to solve)

Select the NumSolve strip and tap **Insert**, **AddStrip Help**.

Some suggested text is shown.

Close the strip, enter a suitable title for it and save the eActivity.

