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471	Inverse Normal Probability Calculations	Author	Charlie Watson
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		CPM OS	**03.04.4000**

We will calculate normal probabilities in the Statistics application.

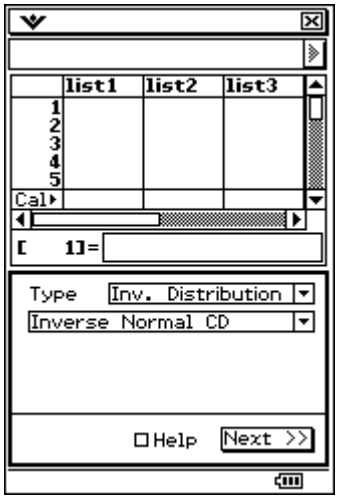
Assume we are working with a normal population of weights with mean 65kg and standard deviation of 12kg.

What is w so that $P(x \geq w) = 0.25$?

Tap **Calc, Inv. Distribution**.

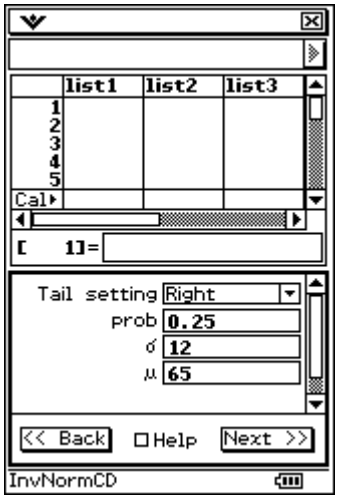
The type of calculation is already set to **Inverse Normal CD**.

Tap Next >>.

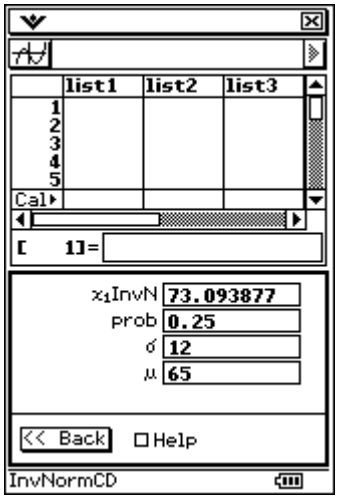


Adjust the tail setting to **Right**.

Enter the three required values as shown and then Next >>.

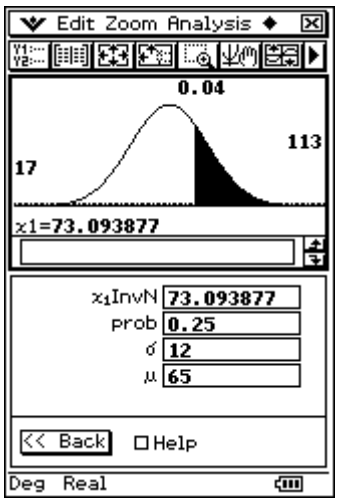


The required weight is close to 73.1kg.



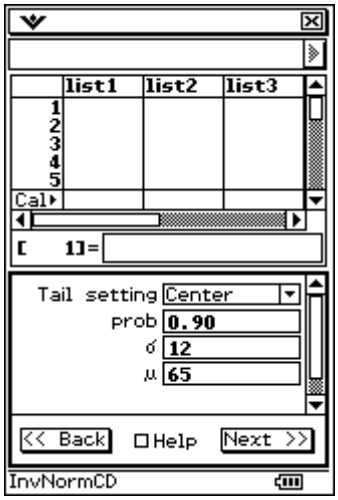
Tap on the graph icon in the top left corner of the screen.

The black area represents the calculated inverse normal probability.



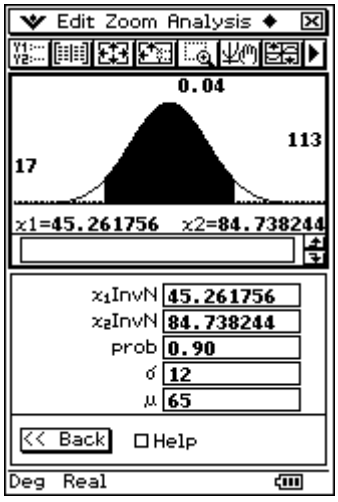
What is *w* so that 90% of weights lie within *w* kg of the mean?

Repeat the previous steps, only this time the tail setting is **Center**.



The calculated lower and upper weights are shown.

Hence $w = 65 - 45.26 = 84.74 - 65 = 19.74$ kg.



Inverse normal probabilities can be calculated in the Main application and also using the normCDF function in a solve strip within an eActivity.

These are explained in other help sheets. Please refer to the menu.