Statistical Reasoning Name:  
Standard Normal Distributions – Calculator

Consider the weights of 18 month old boys in the U.S. According to published growth charts, the average weight is approximately 11.8 kg with standard deviation of 1.28 kg. Calculate the percentage of 18 month old boys in the U.S. who weigh between 10.5 kg and 14.4 kg.

*Draw a picture…*

In order to find the percentage with your calculator, you must know a few things…

Mean (µ) = \_\_\_\_\_\_\_\_ S (σ) = \_\_\_\_\_\_\_\_

Lower Boundary = \_\_\_\_\_\_\_\_ Upper Boundary = \_\_\_\_\_\_\_\_

Press 2nd,  VARS, 2:normalcdf(, ENTER

If your calculator gives you a menu, enter the information listed above and then hit enter on paste, and then enter again

If your calculator doesn’t give you a menu, enter the information in the following order, separated by commas: lower boundary, upper boundary, mean, standard deviation and press enter

The decimal that it gives you is the proportion of the area under the normal curve.

\*\*If you want your lower boundary to be -∞, use -1E99 and if you want your upper boundary to be +∞, use 1E99.\*\*

Working backwards with your calculator… (this will give you the x-value, not the z-score)

Press 2nd, VARS, 3:invNorm(

If your calculator gives you the menu, type in the information you want – the area is the decimal you are given - (keep LEFT highlighted) and press paste and then enter

If your calculator doesn’t give you the menu, type in the area (decimal you are given), the mean and the standard deviation, all separated by commas