Topic: Using the Calculator with Observations & Probability **Date**: _____

What am I learning today?

_____

_____

Main Ideas/ Questions X → Z → P	**Notes** **Recall**: What order MUST you go in when calculating from an observation to a percentage?

Finding the percentage from an observation

The calculator lets you "_____" the z-score part from an observation to a probability or a probability to an observation.

Calculator Type

TI-36X Pro

1. 2nd DATA [stat-reg/distr]
2. ▶ **DISTR**
3. Click **Normalcdf**

4. Enter Mean (MU) and Standard Deviation (Sigma)
5. Enter lower bound (lowest value)

Use -9999999 when LESS THAN

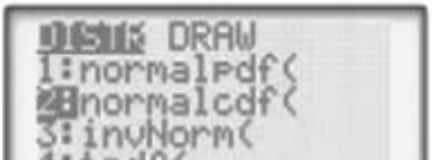
6. Enter upper bound (highest value)

Use 9999999 when MORE THAN

7. CALC

TI-83 Plus

1. 2nd VARS **[DISTR]**
2. Click **Normalcdf**



3. Normalcdf(**LOWER BOUND, UPPER BOUND, MEAN, STANDARD DEVIATION**)
4. LowerBound = lowest value

Use -9999999 when LESS THAN

5. UpperBound = highest value

Use 9999999 when MORE THAN

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Main Ideas/ Questions

Finding the observation with the probability

Notes

Calculator Type

TI-36X Pro	**TI-83 Plus**
1. 2nd DATA [stat-reg/distr]	1. 2nd VARS **[DISTR]**
2. ▶ **DISTR**	2. Click **invNorm**
3. Click **invNormal**	3. invNorm**(AREA/PROBABILITY, MEAN, STANDARD DEVIAION)**
4. Enter area, Mean (MU) and Standard Deviation (Sigma)	
AREA MUST BE THE **LESS THAN probability	***AREA MUST BE THE **LESS THAN probability***

Example 1: When Tiger Woods hits a golf ball down a course, the distance the ball travels follows a normal distribution with a mean of 304 yards and a standard deviation of 8 yards.

a. What distance separates the bottom 9%?

b. What percentile is a distance of 323 yards?

c. What distance separates the 25^{th} percentile?

d. What percentage of Tiger's golf balls are between 302 and 324 yards?

e. What distance is in the top 15%?

f. What percentage of Tiger's hits are between 294 and 332 yards?