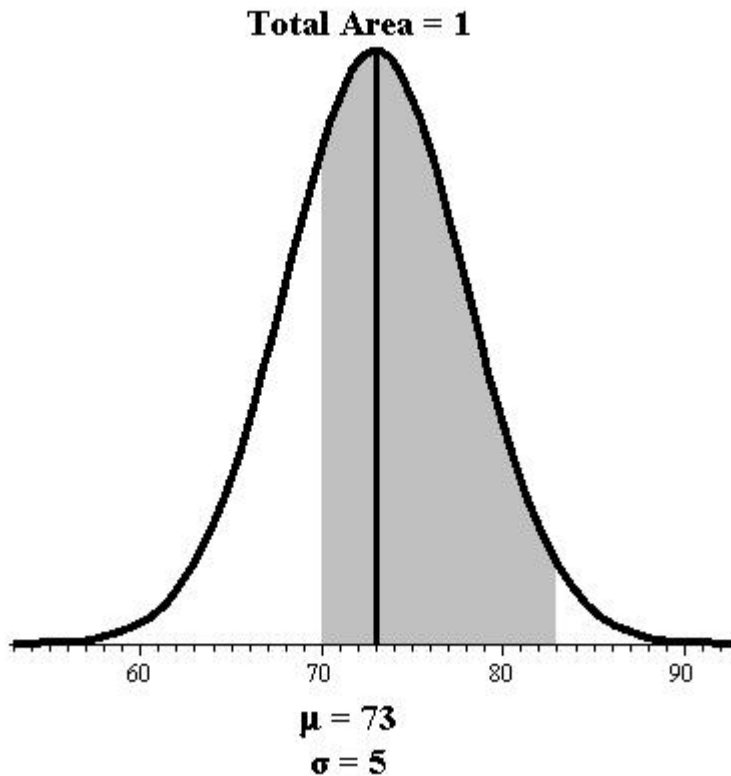# TI Instructions

How to find Probability of Normal Distribution:

Given normal distribution with $\mu = 73$ **and** $\sigma = 5$

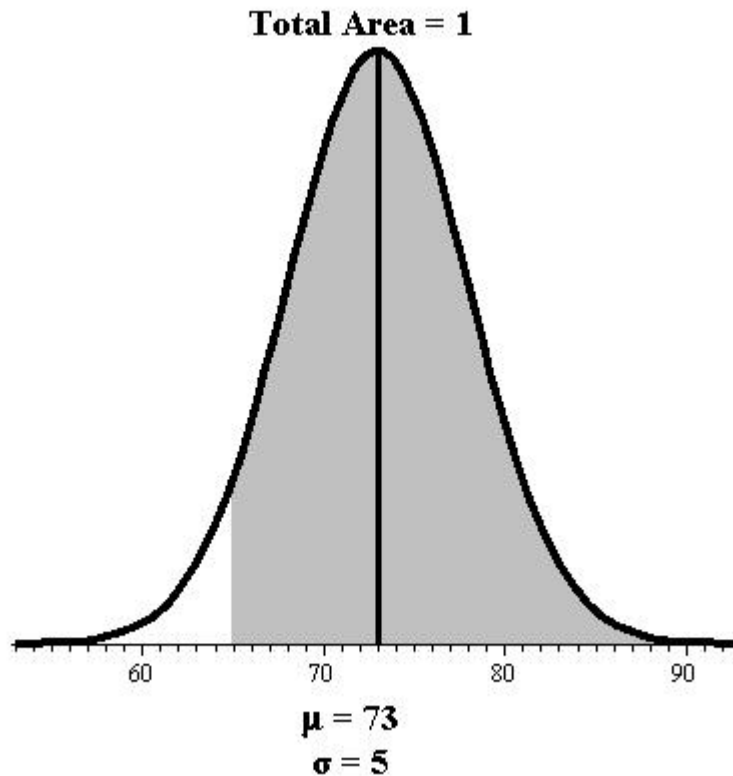**Ex. 1: Find** $P(70 < x < 83)$

$$P(70 < x < 83) = \text{normalcdf}\,(70, 83, 73, 5)$$

TI Instruction:

1. 2nd   **2. VARS**   **3. Normalcdf(**   **4. Left value** 70, **then ,**

5. Right value 83, **then ,**   **6.** 73 **for** μ, **then ,**   **7.** 5 **for** σ **followed by** $)$

Ex. 2: Find $P(x > 65)$

$$P(x > 65) = \text{normalcdf}\,(65, \text{E}10, 73, 5)$$

TI Instruction:

1. 2nd   **2. VARS**   **3. Normalcdf(**   **4. Left value** 65 **, then ,**

5. Right value $\text{E}10$ **, then ,**   **6.** 73 **for** μ **, then ,**   **7.** 5 **for** σ **followed by** $)$

Note:

$\text{E}10 = 10^{10}$ **, to enter** $\text{E}10$ **: Do 2nd , for EE followed by** 10 **.**

Ex. 3: Find $P(x < 80)$

Total Area = 1
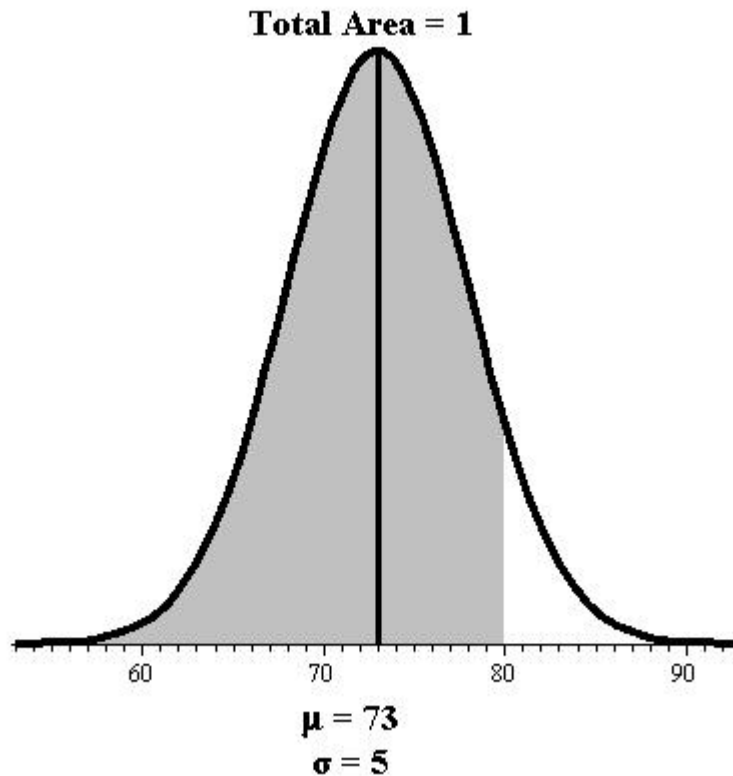
$$P(x < 80) = \text{normalcdf}(-\text{E}10, 80, 73, 5)$$

TI Instruction:

1. 2nd   **2. VARS**   **3. Normalcdf(**   **4. Left value** $-\text{E}10$, **then** **,**

5. Right value 80, **then** **,**   **6.** 73 **for** μ, **then** **,**   **7.** 5 **for** σ **followed by** **)**

Note:

$-\text{E}10 = -10^{10}$, **to enter** $\text{E}10$: **Do 2nd** **,** **for EE followed by** 10.

Ex. 4: Find P_{10} **that is find** k **such that** $P(x < k) = 0.10$

Total Area = 1

60   70   80   90

$\mu = 73$

$\sigma = 5$
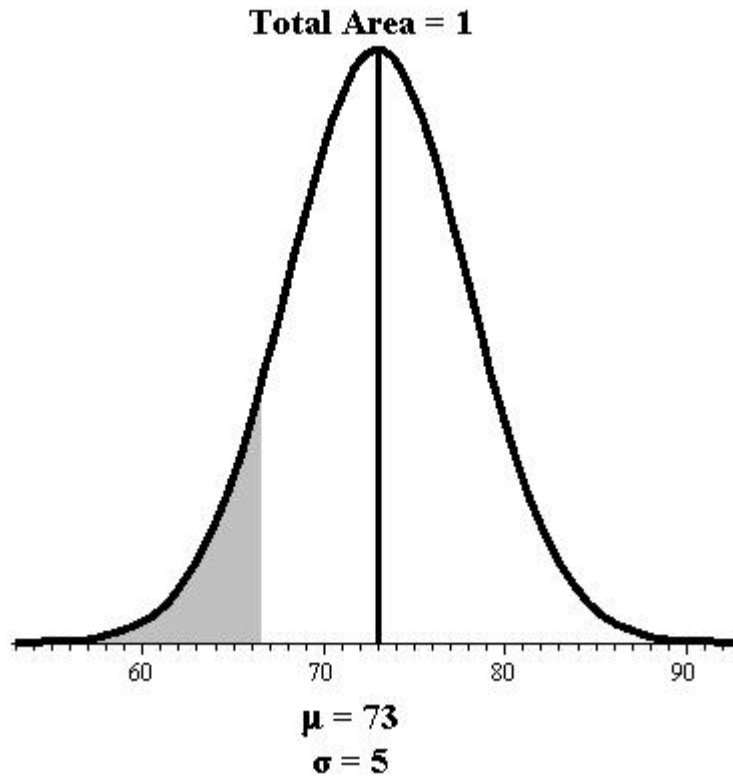
$$k = \text{invNorm}(0.10, 73, 5)$$

TI Instruction:

1. 2nd   **2. VARS**   **3. invNorm(**   **4. Left area** 0.10**, then ,**

5. 73 **for** μ**, then ,**   **6.** 5 **for** σ **followed by** $)$