

TI 83+ / 84 Shade Function Normal Distribution

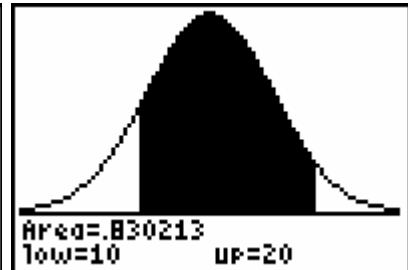
The mean number of red m&m's in a bag is 14 with a standard deviation of 3.5 m&m's.

What is the probability that there are between 10 – 20 m&m's?

```
normalcdf(10,20,
14,3.5)
.8302128961
```

```
DISTR 2nd 2nd
1 ShadeNorm(
2: Shade_t(
3: ShadeX2(
4: ShadeF(
```

```
ShadeNorm(10,20,
14,3.5)
```



```
WINDOW
Xmin=3.5
Xmax=24.5
Xscl=0
Ymin=-.0285714...
Ymax=.11428571...
Yscl=0
Xres=1
```

To set up window:

$$X \text{ min} = \text{mean} - 3 * \text{st. dev}$$

$$X \text{ max} = \text{mean} + 3 * \text{st. dev}$$

$$Y \text{ min} = -.1 / \text{st. dev}$$

$$Y \text{ max} = .4 / \text{st. dev}$$

Don't forget to clear the drawing. 2nd DRAW, ClrDrw

Try: The mean number of minutes in a cell phone call is 15.6 with a standard deviation of 5. What is the probability that a random call lasted more than 22 min.?

