## KEEP THIS PAPER IN a SAFE PLACE FOR FUTURE REFERENCE!!!!!!

## calculator hints:

Go to DISTR by pushing [2nd VARS
Push the up arrow $\Delta$ to find
binompdf and binomcdf
OR...enter A for binompdf
enter B for binomcdf
$\rightarrow$ PROBABILITY function finds one value binomPdf:
(\#trials, prob of desired event, \# of occurrences) n
r
$\rightarrow$ CUMULATIVE finds several values and adds from zero up to maximum value.

## binomCdf:

(\# trials, prob of desired event, max\# of occurrences)

Note: the comma button is above the 7 button.

## check EVEN answers for 14.3 \#21-27,30

Use probability notation to show what you are solving for, then write the calculator command, and solve with calculator.

| $3.317 \times 10^{-10}$ | $3.403 \times 10^{-10}$ |  |
| :--- | :--- | :--- |
| .0000128 | .20972 | .28347 |
| .44165 | .85197 | .99963 |

3439

Check EVEN answers for 14.5 \#6,8,10-12,14

| 0 | 1 | 1 | 1 | 2 | 4 | 4 | 8 | 8 | 8 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

$\begin{array}{lllllll}16 & 17 & 17.16 & 19.75 & 20 & 20 & 85.5\end{array}$
$\begin{array}{lllll}86.25 & 107.38 & 110 & 132 & 183\end{array}$

## Calculator hints regarding data input:

to clear each list $\rightarrow$ if you are editing a list, just arrow up and highlight $L_{1}$, then push clear and <enter>
to clear ALL lists at once $\rightarrow 2^{\text {nd }}$ Mem (above the + sign) then ClrAllLists
get started by entering data into a list $\rightarrow$
push STAT button, then choose option 1:Edit (push $2^{\text {nd }}$ QUIT to close window when finished)
to sort each list $\rightarrow$ push STAT button, then choose option 2:Sort A ( $\mathbf{L}_{\mathbf{1}}$ ) and fill in the appropriate name of the data list. Note: look above the number 1 key and choose $L_{1}$. Push <enter> and the calculator will say "Done." push STAT button, then choose option 1:Edit to view the list in order.

OOPS, a list got deleted completely !!
to rename/reset all lists $\rightarrow$ push STAT button, then choose option 5:SetUpEditor, then push <enter>
to calculate mean, median, STANDARD DEVIATION, etc $\rightarrow$ push STAT $\square$ CALC to calculate statistics for your data by choosing option 1: 1-Var Stats $L_{1}$.
Important: be sure to fill in the appropriate list name, otherwise $L_{1}$ will be chosen by default each time. Use down arrow to view ALL data in both screens.

NOTE: if using frequency table, enter 1: 1-Var Stats $L_{1}, L_{2}$

| hints 14.5 \#11, \#12 <br> use 2 lists: enter $X$ into $L_{1}$ | 14.5 \#14 complete this frequency table |  |
| :---: | :---: | :---: |
| enter Freq into $L_{2}$ | x | freq |
| STAT ${ }^{\text {b }}$ | 17 |  |
| 1: 1-Var Stats | 18 |  |
| List: ${ }_{1}$ | 19 |  |
| Frequency: $L_{2}$ | 20 |  |
| (older calculators use notation | 21 |  |

## Area under the Standard Normal Curve:

The area represents the probability (percent of data) for a given interval of the normal distribution.
Calculator commands
we will use today:
2nd DISTR only use cdf
2:normalcdf(lower, upper, $\mu, \sigma$ )
3:invNorm(probability, $\mu, \sigma$ )


The calculator always measures to the left of the $z$-value.

$$
\begin{aligned}
& \text { Calculator commands } \\
& \text { we will use: } \\
& 2^{\text {nd }} \text { DISTR } \quad \begin{array}{l}
\text { Given the boundary lines, fin } \\
\text { the area (percent shaded.) }
\end{array} \\
& \text { 2:normalcdf(lower, upper, } \boldsymbol{\mu}, \boldsymbol{\sigma})^{\text {a }} \\
& \text { 3:invNorm(probability, } \boldsymbol{\mu}, \boldsymbol{\sigma} \text { ) } \\
& \text { Given the area (percent } \\
& \text { shaded), find the boundary line. }
\end{aligned}
$$

Note: Calculator always shades from left to right...from 0\% to the unknown boundary line.

## option 1: 1-Var Stats

$\mathbf{X}=$ mean (average)
$\Sigma \mathbf{x}=$ sum of all data values
$\Sigma \mathbf{x}^{2}=$ sum of the squared data values
$\boldsymbol{S} \mathbf{x}=$ sample standard deviation
$\sigma \mathbf{x}=$ population standard deviation
$\mathrm{n}=$ total number of data values
$\min \mathrm{X}=$ smallest data value
$\mathrm{Q}_{1}=$ first quartile
Med= median of overall data set (2 ${ }^{\text {nd }}$ Quartile) $\mathrm{Q}_{3}=$ third quartile
$\max \mathrm{X}=$ largest data value

