

To Find Binomial Probabilities

Use these functions instead of using the Binomial Table

(or the formulas)

NOTE: The Mean and Std. Dev. of any discrete random variable can be found on the calculator by using STAT then 1-Var Stats (TI-83) or 2nd STAT oneVar (TI-86). Put x's in L1 and P(x)'s in L2.

On the TI-83 use the function `binompdf`(
On the TI-86 use the function `binpdf`(

Where are the functions on the calculator?

- To access the functions on the TI-83, press 2nd DISTR then 0: `binompdf`(
- To access the functions on the TI-86, press 2nd MATH MORE then select STAT and then DI ST then press MORE then select `binpdf`(

Example problem shown at right:
 For $n = 8$, $p = .3$ and $X = 0, 1, 2$ (or $X < 3$), find the binomial probability.

TI-83 2nd LIST arrow to MATH select 5: `sum`(
 2nd DISTR select 0: `binompdf`
 Then enter 8, . 3, {0, 1, 2})
 Press ENTER

```
sum(binompdf(8,.3,{0,1,2}))
.55177381
```

TI-86 2nd LIST OPS MORE
`sum` 2nd MATH MORE STAT
 DI STR MORE `binpdf`
 Then enter
 8, . 3, {0, 1, 2})
 (Note: to find the "{" and ")"
 press 2nd LIST)

```
sum binpdf(8,.3,{0,1,2})
.55177381
```

THE nCr FUNCTION

```
6 nCr 4
15
```

On your calculator, use the nCr command

to evaluate $\binom{n}{x} = \frac{n!}{x!(n-x)!}$

$$\binom{6}{4} = \frac{6!}{4!(6-4)!} = \frac{6!}{4!2!}$$

Enter as 6 nCr 4

TI-83 Press MATH PRB to find nCr

TI-86 Press 2nd MATH select PRB to find nCr

(NOTES: Enter the 6 before entering the command. On the TI-86, make sure there is a space between the command and the numbers. Use x in place of r.)

NOTE: On the TI-86, you must install the STAT package to run these. The lab TI-86 has it on it. Or ask your instructor.