

MATH 1351 TI-85 EXERCISE I
Introduction to basic screen calculations and editing

Name: _____ SID: _____

A very nice feature of the TI-85 calculator is the ability to put a complete mathematical expression into the machine all at once, view it on the screen, edit any mistakes, and compute the expression with one use of **ENTER**. After obtaining the answer to the computation, the key stroke sequence **2nd ENTRY** recalls the entered expression to the screen where it can then be edited to compute a new answer for the same calculation with different input data.

2nd Pressing the yellow key labeled **2nd** accesses the yellow keyboard commands.

Example: **2nd ENTRY** (**ENTRY** is the yellow command above **ENTER**)

The following exercises are intended to give the students practice in entering, computing, and editing "complicated" mathematical expressions. In each case enter the appropriate expression onto the screen. Don't rely on machine hierarch, use parentheses correctly so as to tell the machine exactly what you want it to do and the order in which the operations are to be done.

In each of the following exercises input the appropriate expression, using the given specific data, onto the screen and press **ENTER** one time to calculate it. To calculate the next number simply edit the expression on the screen appropriately. (Use **2nd ENTRY** to recall the expression to the screen.)

Exercise A. Use the quadratic formula to find the two roots of each of the following polynomials:

If $a \cdot x^2 + b \cdot x + c = 0$ then

$x =$

I. If $2x^2 - 5x - 3 = 0$ then _____ or _____

$x =$ _____ or _____

ii. If $2x^2 - 1 = 0$ then

$x =$ _____ or _____

iii. If $x^2 + x + 1 = 0$ then

$x =$ _____ or _____

Exercise B. The monthly mortgage payments are given by the formula

$$p = iA/(1-(1+i)^{-n}),$$

where A is the amount borrowed, i is the interest per month (APR/12), and n is the total number of payment periods (12*number of years). What are the monthly payments if 100,000 is borrowed at 9% APR for each of the following time periods:

I. 30 years?

ii. _____
20 years?

iii. _____
10 years?

In each of the above cases what is the total amount, TA, paid back at the end of the loan period?

TA =

I. _____

ii. _____

iii. _____

Exercise C. Repeat Exercise B with a new APR of 8%.

I. 30 years?

ii. _____
20 years?

iii. _____
10 years?

In each of the above cases what is the total amount, TA, paid back at the end of the loan period?

TA =

- I. _____
- ii. _____
- iii. _____

Exercise D. Use the law of cosines to find the largest angle in each of the following triangles. (Recall the law of cosines is $a^2 = b^2 + c^2 - 2bc \cos A$, and the largest angle is opposite the largest side.) The inverse cosine function is **cos⁻¹** from the keyboard on the TI-85.

A = _____

I. The sides are of lengths 8.20, 5.10, 4.10 A. = _____

ii. The sides are of lengths 9.6, 6.2., 4.3 A = _____

iii. The sides are of lengths 19.4, 28.5, 33.6 A = _____