

## T1-89 Calculator Tidbits

Note: After hitting "on", hit "home" to use calculus features ☺

### How to differentiate functions

- ① Hit "F3"
- ② Go to "1:d(differentiate)", hit "Enter"
- ③ Type function of interest. (use "x")
- ④ Hit "," (comma, left of division sign)
- ⑤ Hit "x" (underneath "Home")
- ⑥ Hit ")" (End parenthesis, left of comma)
- ⑦ Hit "Enter"

Input:  $d(x^3, x)$   
↑ derivative    ↑ function of interest    ↑ w/ respect to x

### How to Integrate Functions

- ① Hit "F3"
- ② Go to "∫(integrate)", hit "Enter"
- ③ Type function of interest. (use "x")
- ④ Hit "," (comma, left of division sign)
- ⑤ Hit "x" (underneath "Home")
- ⑥ Hit ")" (End parenthesis, left of comma)
- ⑦ Hit "Enter"

Input:  $\int(2 * x, x)$   
↑ Integral    ↑ function of interest    ↑ w/ respect to x

### Calculating 2nd, 3rd, ... n<sup>th</sup> derivatives

- ① Follow ① - ⑤ from "how to differentiate functions,"
- ② Hit "," (comma button)
- ③ Hit "2" for 2nd derivative, ...
- ④ Hit ")" (End parenthesis)
- ⑤ Hit "Enter"

Input:  $d(x^3, x, 2)$   
↑ derivative    ↑ function of interest    ↑ w/ respect to x    ↑ n<sup>th</sup> derivative

### Calculating Definite Integral

Same as above, but after step ⑤, input left bound, comma, then right bound, end parenthesis, then enter,

Input:  $\int(2 * x, x, 0, 3)$   
↑ Integral    ↑ function    ↑ w/ respect to x    ↑ left bound    ↑ right bound

### Other Tidbits

- ① Fraction → Decimal: "♦", "Enter"
- ② Abs. Value: "2nd", "5", "→", "2"
- ③ Turn Calc. off: "2nd", "on"