

TI-83/84 SKILLS

TI-83 Plus Silver Edition
1-15
Defaults Set

RESET DEFAULTS [2nd][MEM] 7 2 2

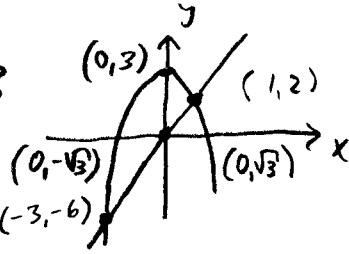
ZERO, DERIVATIVE, INTEGRAL

[Y=]

$y_1 = -x^2 + 3$

$y_2 = 2x$

[ZOOM] 4: ZDecimal (-3, -6)



Zeros for $y_1 = \pm 1.732$
MAXIMUM for $y_1 = x=0, \text{MAX} = 3.$

INTERSECTION y_1 & $y_2 = (1, 2)$ and $(-3, -6)$

DERIVATIVE (AT A POINT) SLOPE OF y_1 at $x=1 = -2$

INTEGRAL (DEFINITE) Area under y_1 from 0 to 1 = $2.667 (= \frac{8}{3})$
Area between curves = $1.667 (= \frac{5}{3})$
Area of $y_2 = \frac{1}{2} \cdot 1 \cdot 2 = 1.$

[2nd][CALC] TRACE

[2nd][CALC] 2: zero
[2nd][CALC] 4: MAXIMUM

[2nd][CALC] 5: Intersect

[2nd][CALC] 6: dy/dx

[2nd][CALC] 7: $\int f(x) dx$

WINDOWING

$y_1 = x(100-x)(200-x)$

GRAPH SHOWING ZEROS, MAX & MIN.

Zeros = 0, 100, 200
MAX = $x = 42.265, \text{MAX} = 384900.1795$
MIN = $x = 157.735, \text{MIN} = -384900.1795$
AVERAGE OF X VALUES OF MIN & MAX = 100.

[WINDOW]

$X_{min} = -100$ $Y_{min} = -1000000$
 $X_{max} = 300$ $Y_{max} = 1000000$
 $X_{sc1} = 10$ $Y_{sc1} = 100000$
 $X_{res} = 1$

