

Just-in-Time
Algebra
Review!

S u c c e e d i n g i n

applied calculus

a l g e b r a e s s e n t i a l s

Thu Vlen DHKTCN-TN



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second edition

WARREN B. GORDON

The Laws of Exponents

$$b^n = b \cdot b \cdots b$$

$$b^{-n} = \frac{1}{b^n}$$

$$b^m \cdot b^n = b^{m+n}$$

$$(b^m)^n = b^{m \cdot n}$$

$$\frac{b^m}{b^n} = b^{m-n}$$

$$b^0 = 1$$

$$(ab)^n = a^n b^n$$

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$$

The Quadratic Formula

Given, $ax^2 + bx + c = 0$, with $a \neq 0$, then

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

The Slope Formula

Let (x_1, y_1) and (x_2, y_2) be any two points on a line for which $x_1 \neq x_2$, then the slope of the line is given by

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

The Point Slope Equation of a Line

If you are given the slope of a line m , and know the coordinates of one point (x_1, y_1) on the line, then the equation for the line is given by the point-slope equation

$$y - y_1 = m(x - x_1)$$

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a p p l i e d c a l c u l u s

s e c o n d e d i t i o n

Warren B. Gordon

*Baruch College
City University of New York*

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Warren B. Gordon**

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