

MTH 30 LECTURE NOTES (Ojakian)

Topic 15: Exponential Functions

OUTLINE

(References: 4.1, 4.2)

1. Exponential Functions
 2. Graphing
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1. Exponential Function

- (a) General Form: $A \cdot B^{cx}$ ($A \neq 0$ and $B > 0$ and $c \neq 0$).
- (b) Definition and contrast to polynomial via examples
- (c) Exponential growth versus Exponential decay
Two notations for decay: Fractional base or negative exponent
- (d) Compute some values (including negative and fractions)

2. Graphing Exponential Functions

- (a) Shape and asymptotes (note: growth versus decay)
- (b) Show speed of growth: Poly versus Exp (in Excel)
- (c) Example: Start with 2 organisms, and population doubles every year. Describe with function.
- (d) Graph transformations