Exponential Models

Lecture 38
Section 4.4

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Objectives

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- Work applications involving exponential functions.

Example

Example 4.4.4 (modified)

Lester Cummings is a marketing manager. He determines that sales of a particular commodity produced by his firm will increase exponentially once an advertising campaign for the commodity is initiated. Lester finds that the sales level is 19,000 units at the time the advertising began and was 21,000 units 5 weeks later.

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(c) At what rate should Lester expect sales to be changing t weeks after the advertising begins?

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(b) What sales level should Lester expect 8 weeks after the advertising begins?

(c) At what rate should Lester expect sales to be changing t weeks after the advertising begins?

(d) What sales level does the model predict 100 weeks after advertising begins?

Example

Example 4.4.5

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(a) How many letters can a new employee sort per hour?

(b) How many letters can a clerk with 6 months' experience sort per hour?

(c) How many letters, in the long run, can an experienced clerk sort per hour?