

Problems | Name: _____

9.1 Sequences and Series

9.1.1. Find term 8 of $10, 7, 4, \dots$

9.1.2. Find term 4 of $81, 27, 9, \dots$

9.1.3. Find the sum of the first five terms of the geometric sequence $3, 6, 12, \dots$

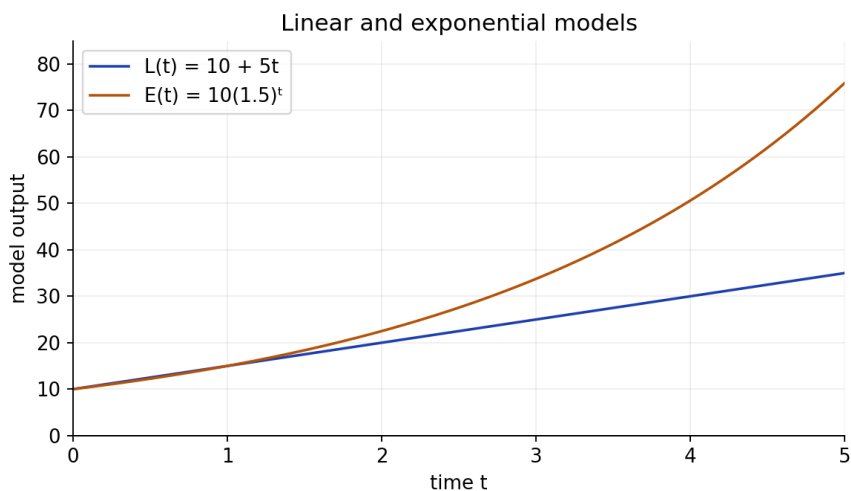
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9.2 Model Selection

9.2.1. Data at $x=0, 1, 2, 3$ are 1, 4, 9, 16. Identify a simple model.

9.2.2. Data at $t=0, 1, 2$ are 100, 80, 64. Identify the factor and a model.

9.2.3. The graph compares $L(t) = 10 + 5t$ and $E(t) = 10(1.5)^t$. Which has constant additive change and which has constant multiplicative change?



Compare equal additive and equal multiplicative change.

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9.3 Technology and Interpretation

9.3.1. A linear model is $y = 2x + 1$. Observations at $x = 0, 1, 2$ are 1, 4, 5. Find the residuals.

9.3.2. A calculator reports an intersection at $x = 4.37291$. A context asks for the nearest hundredth of an hour. Report the result.

9.3.3. Why might a population model fitted over five years fail fifty years later?
