

Kaku-Uneh David 12/8/2004/047

$$y = y_0 e^{kt}$$

$$y = 3y_0 \quad \frac{y}{y_0} = 3$$

$$\frac{y}{y_0} = e^{kt} = 3 \quad \text{at } t = 9$$

$$y_0 = 50$$

$$\frac{y}{y_0} = e^{kt} = 9 \quad \text{at } t = 18$$

$$\frac{y}{y_0} = 9$$

$$y = 50 e^{kt}$$

$$y = 150 e^{kt}$$

$$3 = e^{kt}$$

$$\ln 3 = kt$$

$$\ln 9 = 2k$$

$$k = \frac{\ln 3}{9} = 0.122$$

$$9 = e^{kt}$$

$$\ln 9 = 18k$$

$$k = 0.122$$

$$y = 50 e^{0.122t}$$

$$y = 150 e^{0.122t}$$

$r = 0.1, D = 1$

$A(t) = 50 \cdot \exp(0.122 \cdot t)$

$B(t) = 150 \cdot \exp(0.122 \cdot t)$

A(t) =

50
56.438
63.817
72.098
81.453
92.022
103.962
117.451
132.691
149.908
168.359
188.334
210.161
234.289
275.896
311.934

B(t) =

150
169.453
191.452
216.293
244.358
276.065
311.895
352.354
398.073
449.725
508.078
574.003
648.483
732.626
827.687
935.083

