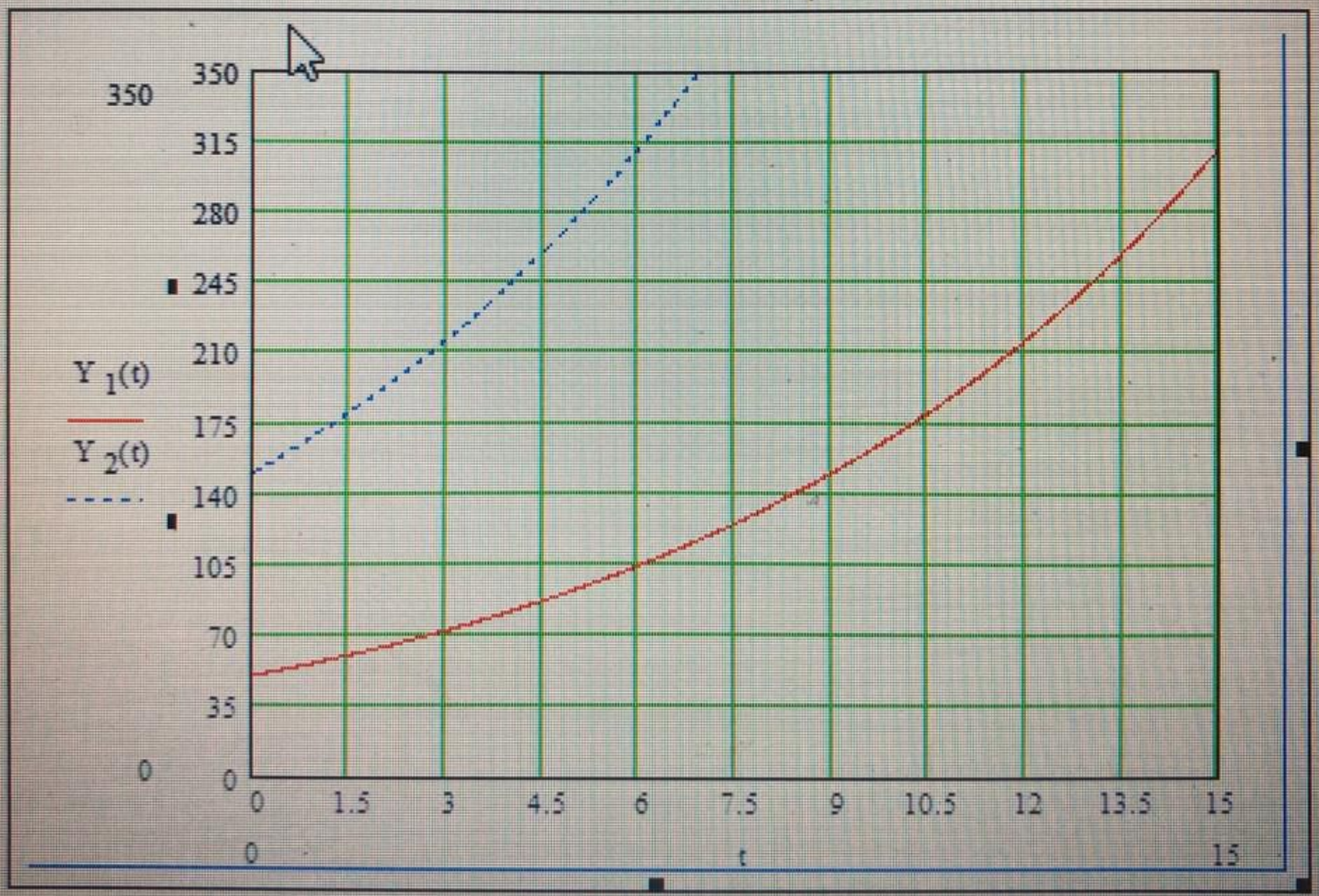
File Edit View Insert Format Math Symbolics Window Help

Normal Arial 10 B I U

$$Y_1(t) := 50e^{0.122t}$$

$$Y_2(t) := 150e^{0.122t}$$



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$y = y_0 e^{kt}$

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

$\frac{y=3}{y_0}$ at $t = 9$

$\frac{y}{y_0} = 9$ at $t = 18$

$y_0 = 50 - 9$

$y_0 = 150 - b$

$y = 50e^{kt}$

$y = 150e^{kt}$

$3 = e^{k9}$

$\ln 3 = \ln e^{ek9}$

$\ln 3 = 9k$

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

$k = 0.122$

$9 = ek^{18}$

$\ln 9 = \ln e^{ek18}$

$\ln 9 = 18k$

$k = \frac{\ln 9}{18}$

$k = 0.122$

$y = 50e^{0.122t}$

$y = 150e^{0.122t}$