

SD's model using Sophie Pettity  
data "Radioactivity" AS90647

$$\ln(y) = -0.3786x + 4.7206$$

~~Model~~  $y = ar^x$

$$\ln(y) = kx + \ln(a)$$

$$\ln(r) = -0.3786$$

$$\ln(a) = 4.7206$$

$$r = 0.6848$$

$$a = 112.2$$

~~Exp~~  $y = ae^{kx}$

$$\ln(y) = kx + \ln(a)$$

$$k = -0.3786$$

$$\ln(a) = 4.7206$$

$$a = 112.2$$

log model

$$y = 112.2 \cdot 0.6848^x$$

exp model

$$y = 112.2 e^{-0.3786x}$$

Test

$$x=0, y=112.2$$

$$x=12, y=1.2$$

$$x=6, y=11.6$$

$$x=0, y=112.2$$

$$x=12, y=1.2$$

$$x=6, y=11.6$$

Computer exp trend

$$y = 117.25 e^{-0.3538x}$$

$$x=0, y=117.3$$

$$x=12, y=1.2$$

$$x=6, y=11.7$$