**Solution 17.11**

The function can be linearized by dividing it by x and taking the natural logarithm to yield

$$\ln(y / x) = \ln \alpha_4 + \beta_4 x$$

Therefore, if the model holds, a plot of $\ln(y/x)$ versus x should yield a straight line with an intercept of $\ln \alpha_4$ and a slope of β_4.

x	y	ln(y/x)
0.1	0.75	2.014903
0.2	1.25	1.832581
0.4	1.45	1.287854
0.6	1.25	0.733969
0.9	0.85	-0.05716
1.3	0.55	-0.8602
1.5	0.35	-1.45529
1.7	0.28	-1.80359
1.8	0.18	-2.30259

y = -2.4733x + 2.2682
R^2 = 0.9974
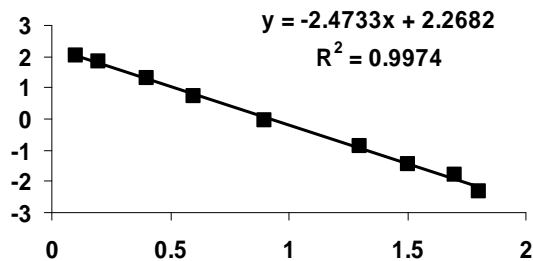
Therefore, $\beta_4 = -2.4733$ and $\alpha_4 = e^{2.2682} = 9.661786$, and the fit is

$$y = 9.661786 x e^{-2.4733x}$$

This equation can be plotted together with the data: