Practice worksheet | Statistics and regression

Exponential regression

Name: _____ Date: _____

6 questions | 18 marks

1. Find an exact exponential model for y=50,100,200 at x=0,1,2. [3 marks]

2. For $\hat{y} = 120(1.1)^x$, predict the response at x=3. [3 marks]

3. A log fit is ln(ŷ)=1.5+0.2x. Find A and b in $\hat{y} = Ab^x$. [3 marks]

4. Why cannot a zero or negative response be entered directly into a real natural-log regression? [3 marks]

5. A model multiplies by 0.96 each week. Find its modelled change over three weeks. [3 marks]

6. A log-scale regression has $r^2=0.94$. State a careful interpretation. [3 marks]