Practice worksheet | Statistics and regression

Interpolation/extrapolation

Name: _____ Date: _____

6 questions | 18 marks

1. Data were collected for x from 5 to 20. Classify predictions at x=12 and x=25. [3 marks]

2. The observed x-values are 1,3,5,7. Is a prediction at x=4 interpolation even though x=4 was not observed? [3 marks]

3. A fitted line is $\hat{y}=8+1.5x$. Predict at x=10 and state why the equation alone is insufficient to judge reliability. [3 marks]

4. A model predicts 112% attendance. Explain the appropriate response. [3 marks]

5. A model from one machine type is applied to a newer machine. What assumption needs checking? [3 marks]

6. Why might a prediction inside a range containing only two distant observations be unreliable? [3 marks]