

Problem 7

- (a) A detailed description of lowess (along the lines of the notes).

Use pictures to help. Showing understanding of material important. A clear description is more valuable than a list of formulae.

- (b) The greater the span, the smoother the fit.
The span = 0.05 fit is very variable.
The span = 0.15 fit is smoother and captures some rises and falls in the scatter.
The span = 0.35 fit is very smooth but may be missing some subtle variation in the data.

A systematic study using cross-validation may be needed to choose an appropriate span.

- (c) Describe kernel smoothing (as recommended above)