

## 9.3: Summary

This chapter has focused on two key aspects of simple regression models: hypothesis testing and measures of the goodness of model fit. With respect to the former, we focused on the residual standard error and its role in determining the probability that our model estimates,  $\beta$  and  $\alpha$ , are just random departures from a population in which  $\beta$  and  $\alpha$  are zero. We showed, using, how to calculate the residual standard errors for  $\alpha$  and  $\beta$  and, using them, to calculate the t-statistics and associated probabilities for hypothesis testing. For model fit, we focused on model covariation and correlation and finished up with a discussion of the coefficient of determination –  $R^2$ . So you are now in a position to use simple regression and to wage unremitting geek-war on those whose models are endowed with lesser  $R^2$ s.

15. The question wording was as follows: On a scale from zero to ten, where zero means no risk and ten means extreme risk, how much risk do you think global warming poses for people and the environment?↵
16. Note that with a **bivariate model**,  $R^2$  is equal to the square of the correlation coefficient.↵

This page titled [9.3: Summary](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [Jenkins-Smith et al.](#) ([University of Oklahoma Libraries](#)) via [source content](#) that was edited to the style and standards of the LibreTexts platform.