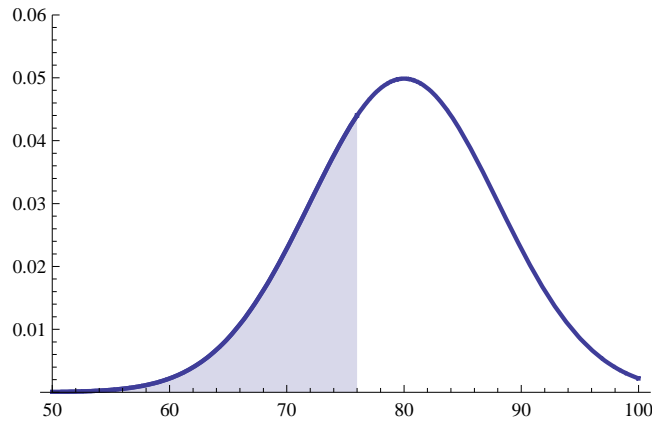# Homework Solutions
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Exercise 22

(a) The following diagram shows the distribution and the shaded part indicates the score of 76.

(b) They are asking for the proportion (area), so we should use `normalcdf`. The answer is given by `normalcdf(-E99,76,80,8)` = 0.3085.

(c) Now they give a proportion (10%) and ask for a value of the variable (test score). So we need to use `invNorm`. The 10% figure refers to the *upper* 10%, so we want the 90th percentile. The answer is given by `invNorm(.90,80,8)` = 90.25.

(d) Use the z-scores to make the comparison. In Section 001, your z-score was $z = \dfrac{76 - 80}{8} = -0.5$. In Section 002, your z-score would be $z = \dfrac{78 - 80}{8} = -0.25$. You would be better off in Section 002.