

Chapter 6 FRAPPY!

Student Sample Commentary

Sample #1

In part (a), the response indicated use of the normal distribution and labels the mean and standard deviation in the `normalcdf` command. The response also labeled the correct boundary values in the `normalcdf` command and reported a correct probability. Part (a) was scored essentially correct (E). In part (b), the response identified use of the binomial distribution and labeled the values of n and p in the `binompdf` command. The value of interest was identified and a correct probability was reported. Part (b) was scored essentially correct (E). In part (c), the mean and standard deviation were calculated correctly, but no work was shown for the calculation of the mean. Part (c) was scored partially correct (P). In part (d), the response correctly identified use of a normal distribution, along with the boundary value and standard deviation. The z -score used was incorrect, but a mean consistent with the wrong z -score was provided. Part (d) was scored partially correct (P). With two parts essentially correct and two parts partially correct, the entire answer was judged as substantial and earned a score of 3.

Sample #2

In part (a), the response earned credit for the first two components by showing a correct z -score calculation. Because the probability was also correct, part (a) was scored essentially correct (E). In part (b), the response attempted to use the binomial probability formula, but did not include the binomial coefficient. Because everything else was correct, part (b) was scored partially correct (P). In part (c), the mean was calculated correctly with work shown. However the standard deviation was not calculated correctly. Part (c) was scored partially correct (P). In part (d), the response used the wrong z -score and reversed the boundary value and mean in the z -score formula. Because the first two components were not correct, part (d) was scored incorrect (I). With one part essentially correct and two parts partially correct, the entire answer was judged as developing and earned a score of 2.