12.7

Some people enjoy the anticipation of an upcoming product or event and prefer to pay in advance and delay the actual consumption/delivery date. In other cases, people do not want a delay. An article in the Journal of Marketing Research reported on an experiment in which 50 individuals were told that they had just purchased a ticket to a concert and 50 were told that they had just purchased a personal digital assistant (PDA). The participants were then asked to indicate their preferences for attending the concert or receiving the PDA. Did they prefer tonight or tomorrow, or would they prefer to wait two or four weeks? The individuals were told to ignore their schedule constraints in order to better measure their willingness to delay the consumption/delivery of their purchase. The following table gives partial results of the study:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Concert |  | PDA |
| Tonight or tomorrow | | | 28 |  | 47 |
| Two to four weeks | |  | 22 |  | 3 |
| Total |  |  | 50 |  | 50 |

a. What proportion of the participants would prefer delaying the date of the concert?

b. What proportion of the participants would prefer delaying receipt of a new PDA?

c. Using the 0.05 level of significance, is there evidence of a significant difference in proportion willing to delay the date of the concert and the proportion willing to delay receipt of a new PDA?

12.10

An experiment was conducted to study the choices made in mutual fund selection. Undergraduate and MBA students were presented with different S&P 500 index funds that were identical except for fees. Suppose 100 undergraduate students and 100 MBA students in selected. Partial results are shown as follows:

|  |  |  |
| --- | --- | --- |
|  | Undergraduate | MBA |
| Highest cost fun | 27 | 18 |
| Not highest cost fun | 73 | 82 |

 a. At the 0.05 level of significance, is there evidence of a difference between undergraduate and MBA student in the proportion who selected the highest-cost fund?

 b. Determine the p-value in (a) and interpret its meaning?

12.29

Two candidates for governor participated in a televised debate. A political pollster recorded the preferences of 500 registered voters in a random sample prior to and after the debate:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | Preference After Debate | |  |
| Preference Prior to Debate | | | Candidate A | Candidate B | Total |
| Candidate A | |  | 269 | 21 | 290 |
| Candidate B | |  | 36 | 174 | 210 |
| Total |  |  | 305 | 195 | 500 |

a. At the 0.01 level of significance, is there evidence of a difference in the proportion of voters who favored Candidate A prior to and after the debate?  
b. Compute the p-value in (a) and interpret its meaning.