**Practice RAT for Week 02, Thursday**

**Answers at the end**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Students in an Intro Stats course were asked to describe their political views as “Liberal”, “Moderate” or “Conservative”. Here are the results   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | Liberal | Moderate | Conservative | **Total** | | Female | 35 | 36 | 6 | **77** | | Male | 50 | 44 | 23 | **115** | | **Total** | **85** | **80** | **27** | **192** |   What percent of the males consider themselves to be "Conservative"? Choose the best approximate answer. |
|  |
| (a) | <15% |
| (b) | 15% to 25% |
| (c) | 25% to 35% |
| (d) | >35% |

|  |  |
| --- | --- |
| 2 | Consider again the data in Question 1. What percent of all students in the class are male and consider themselves to be “Conservative”? Choose the best approximate answer. |
|  |
| (a) | <15% |
| (b) | 15% to 25% |
| (c) | 25% to 35% |
| (d) | >35% |

|  |  |
| --- | --- |
| 3 | Suppose you have a data frame “**people**“ in R with three columns: **age** (in years), **height** (in meters), **HairColor**. Which of the following commands will give you a data frame called “**tall**” consisting of only those people whose height is strictly greater than 2 m? |
|  |
| (a) | tall <- people[people$height > 2, ] |
| (b) | tall <- people[height > 2, ] |
| (c) | tall <- people[peopleHeight >= 2, ] |
| (d) | tall <- people[people$height >= 2] |

|  |  |
| --- | --- |
| 4 | Consider the titanic data frame we have used in the video tutorials. Here is the top of the spreadsheet view.    Which R command returns the number of male individuals who survived? You can assume that the data frame titanic is in your environment. |
|  |
| (a) | sum(gender == "Male" & survived == TRUE) |
| (b) | sum(titanic$gender == "Male" & titanic$survived) |
| (c) | sum(titanic$gender ~ titanic$survived) |
| (d) | sum(gender ~ survived, data = titanic) |

|  |  |  |  |
| --- | --- | --- | --- |
| 5 | |  |  | | --- | --- | | The Motion Picture Association of America (MPAA) rates each film to designate the appropriate audience. The ratings are G, PG, PG-13 and R. The ratings of the 20 top-grossing movies in the years 1996, 2006, 2008 and 2012 are shown in the bar charts on the right.  The pie charts below show the same data, but are unlabelled. Match each pie chart with the correct year. |  | |
|  |
| (a) | A 2008. B 1996. C 2006. D 2012. |
| (b) | A 2008. B 1996. C 2012. D 2006. |
| (c) | A 1996. B 2008. C 2012. D 2006. |
| (d) | A 1996. B 2006. C 2008. D 2012. |

**Answers:**

**1b.** 23 / 115 = 0.2

**2a.** 23 / 192 0.12

**3a.**

**4b.**

**5a.**