1. Do International students (INT) and Domestic students (DOM) have different preference in having breakfast at Langara College? A random sample of 1,000 Langara students was drawn. They were asked if they are international or domestic students and whether or not they have breakfast at home before heading out. The results are summarized in the following two-way table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Students** | |  |
|  |  | **International** | **Domestic** |  |
| **Have Breakfast at Home** | **Yes** | 180 | 320 | 500 |
| **No** | 20 | 480 | 500 |
|  |  | 200 | 800 | 1000 |

1. Provide a description of the parameter of interest. **[2 marks]**
2. Set up the null hypothesis and the alternative hypothesis. **[2 marks]**
3. Calculate the test statistic and find the p-value. **[4 marks]**
4. Draw an appropriate conclusion with 1% significance level. **[2 marks]**
5. (This is not technically a two-sample proportion test, but it’s a good application of proportion tests.) From the YouTube video “[Are We Automating Racism](https://www.youtube.com/watch?v=Ok5sKLXqynQ&t=12s)” (at 9:57 mark). Help Joss (host of Glad you Asked) answer her question at around 3:27 mark.