

## Supplementary exercise 1.10 of IPS7e

- (a) Of course it's totally okay to add up the 6 numbers on a calculator, or using the Windows Calculator.

In Minitab, compute the sum using the Stat-Basic Statistics-Display Descriptive Statistics menu, by adding the Sum to the statistics to be calculated and displayed (using the Statistics button):

```
Describe 'Count';
  Mean;
  StDeviation;
  QOne;
  Median;
  QThree;
  Sums;
  Minimum;
  Maximum;
  N.
```

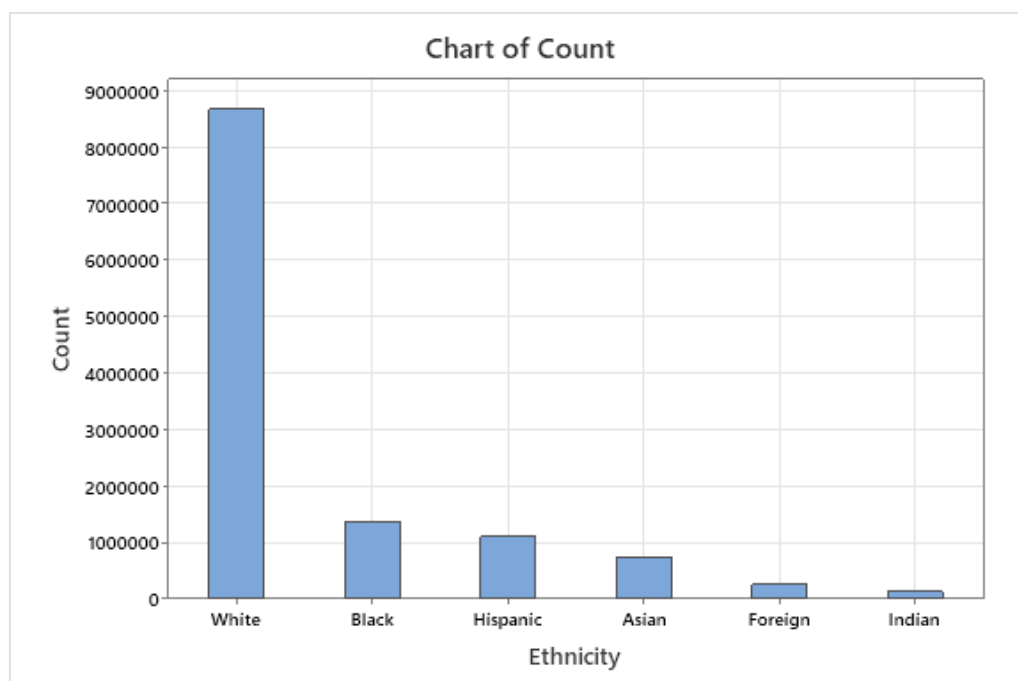
Statistics									
Variable	N	Mean	StDev	Sum	Minimum	Q1	Median	Q3	Maximum
Count	6	2049833	3284138	12299000	127000	230500	922500	3205500	8682000

We could also use the Calc-Column Statistics menu to get the sum displayed as:  
Sum of Count = 12299000.

A (relatively) small round-off errors is seen for the counts, because the problem states there were 12,298,000 undergraduate students in U.S. colleges in 1997.

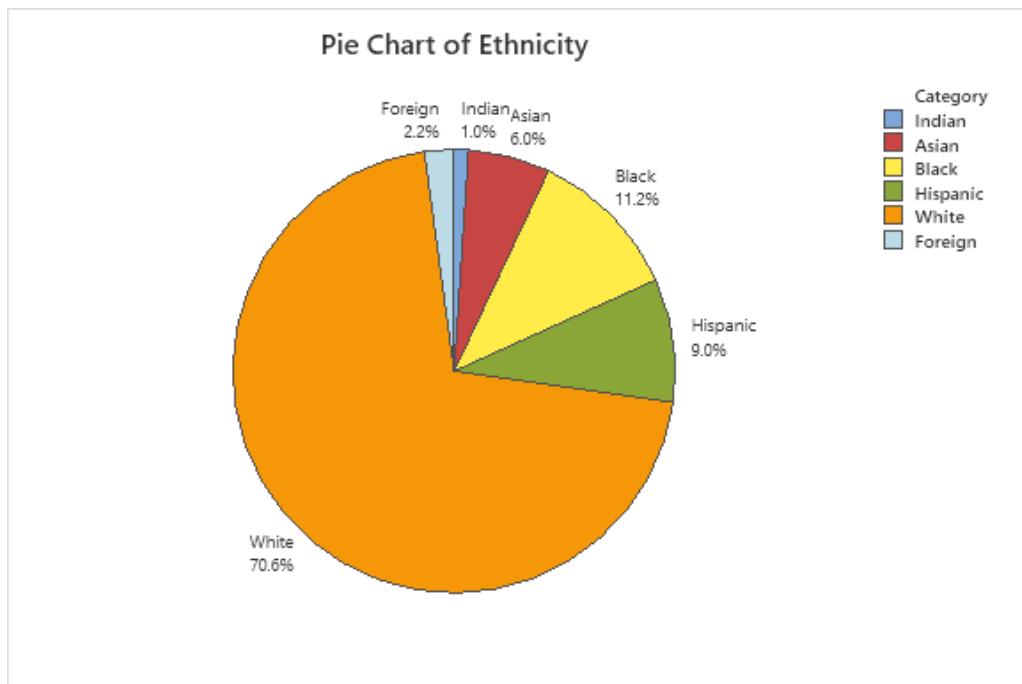
- (b) Use the Graph-Bar Chart menu (choose Simple layout, and Bars represent “Values from a table”) to produce a bar graph. Note that the bars can be ordered by size using the Chart Options submenu.

```
Chart ( 'Count' ) * 'Ethnicity';
  Summarized;
  Decreasing;
  Bar.
```



Alternatively, use the **Graph-Pie Chart** menu (Chart values from a table) to produce a pie graph. Note that category names and percentages can be added using the **Labels-Slice** labels options.

```
PieChart ( 'Count' ) * 'Ethnicity';  
Combine 0.02;  
SLabel;  
PCategory;  
Percent;  
Panel.
```



Both graphical displays show that students of white ethnic background constituted by far the largest group of U.S. undergraduate students.