**Chapter 2 Project – Test Cases**

**Tables of Test Cases**

Complete this table by calculating the results. This must be done with a separate calculator, not by running your program to fill in the results. How can you tell if its results are correct if you don’t have the correct answers already calculated?

Include 2 test cases showing invalid input. This helps determine exactly what IS invalid input. For example, if a calculation includes multiplication, any variable with a value of zero will make the result also zero, which is usually an incorrect result. Any calculation with division cannot divide by zero, that is invalid math. In the table below, if either or both inputs are invalid data, the response is an error message. Details of that error message will be determined later; for the table, stating “error” is sufficient.

What else is invalid data? Can the data be empty or blank? Can it include letters? Think about what would not make sense in the calculations and work, and figure out what is invalid data.

Add 5 more test cases in the table, with 3 that are valid and 2 that are invalid.

Check that your program provides the correct answers.

|  |  |  |  |
| --- | --- | --- | --- |
| **Problem: Calculate MPG; users inputs 2 values** | | | |
| Test  Case | Miles Traveled (input) | Gallons Used (input) | MPG (calculated) |
| 1 | 300 | 30 | 10 |
| 2 | 310 | 9.5 | 32.6 |
| 3 | 347 | 9.7 | 35.8 |
| 4 | 255 | 10.1 | 25.3 |
| 5 | 280 | 7.5 | 37.3 |
| 6 | 300 | 11 | 27.3 |
| 7 | 330 | 15.5 | 21.3 |
| 8 | 400 | 21.5 | 18.6 |
| 9 | 215 | 0 | error |
| 10 | 215 | ten | error |
| 11 | 236 | 12.3 | 19.2 |
| 12 | 426 | 20.1 | 21.2 |
| 13 | 158 | 8.9 | 17.8 |
| 14 | 0 | 32 | Error |
| 15 | Eighty | 10 | Error |

Submit this document as part of this assignment.