**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_**

**ANSWER KEY**

**BOX QUIZ 2**

**Answer the following questions and show all work.**

|  |  |
| --- | --- |
| **Find a counter example for the following statement.**  ***The sum of two even numbers is always an odd number.***  6 + 10 = 16 (16 is not odd) | **Is the following statement a premise or a conjecture?**  ***All students at SGSC love math.***  Conjecture (Cannot be proven) |
| **Fill in the truth table for Conjunction.**   |  |  |  | | --- | --- | --- | | ***p*** | ***q*** | ***p ^ q*** | | ***T*** | ***T*** | T | | ***T*** | ***F*** | F | | ***F*** | ***T*** | F | | ***F*** | ***F*** | F | | **Write the contrapositive for the following statement:**  ***If it is raining, then it is cloudy.***  If it is not cloudy, then it is not raining. |