MTH 154, Quiz #2, Spring 2019   Name _____ KEY _____

Instructions: You must show all work to receive full credit for the problems below. You may use Excel where appropriate. Any datasets needed will be posted on Blackboard with the quiz file, and you should submit such work along with your quiz. Round answers to two decimal places unless other instructions are given in the problem.

1. Following the screenshot below, the formula shown in the formula box is the full formula that appears in cell B1. What is the output of the formula when we press ENTER?

A1		f_x	=IF(A1<25,1,0)

	A	B	C	D	E
1	15	,1,0)			
2	29				
3	35				
4	24				
5	35				
6	46				

(1)

2. Rewrite the expression $\forall x \exists y \; x + y \geq 12$ in English words. Give an example of an x and a y that satisfies the expression.

For all x, there exists y such that $x + y \geq 12$.

$X = 6 \quad Y = 6$

3. If p is the statement "The sun is shining", and q is the statement "I am using an umbrella", translate each of the following logical notations into English sentences.

a. $p \wedge q$

The sun is shining and I am using an umbrella

b. $p \vee q$

The sun is shining or I am using an umbrella.

c. $p \rightarrow q$

If the sun is shining, then I am using an umbrella.

d. $\sim q$

I am not using an umbrella.