

Follow up on assignment due today

1. Hamlet: “There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.” Rewrite using the word “exists.”
2. Lady Macbeth: “All the perfumes of Arabia will not sweeten this little hand.” Rewrite using an existential quantifier.
3. In your opinion, what is mathematics?

After the class discussion today, you should revise your solution and turn it in next class.

Two more examples with quantifiers

1. Every zero of the zeta function having positive real part has real part equal to $1/2$.
(This statement is the Riemann hypothesis, one of the most wanted unsolved problems in mathematics. Whether the statement is true or false is unknown.)
2. Every even integer greater than 2 can be written as the sum of two prime numbers.
(This statement is the Goldbach conjecture, also unsolved.)

Follow up on Exercise 9

“Write the negation of the definition of increasing” means “Write the definition of not increasing.”

What is the negation of an if–then statement?

The negation of “If it’s Thursday, then it’s sunny” is “It is Thursday, and it is not sunny.”