

Math Problem 1: Consider the rational function $y = \frac{x^2 - 3x - 10}{x^2 - 4}$.

- (a) State the domain of $f(x)$.

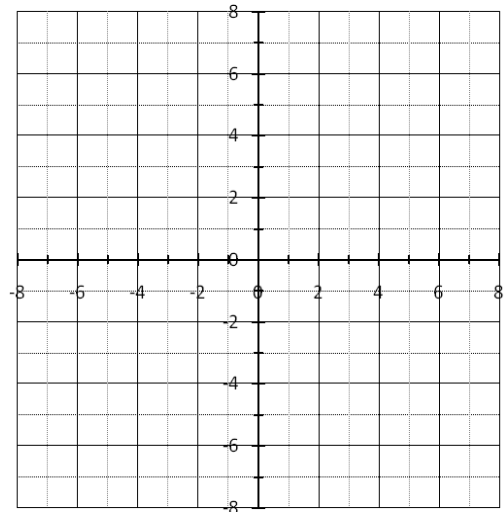
- (b) Simplify $f(x)$.

- (c) Find any vertical or horizontal asymptotes.

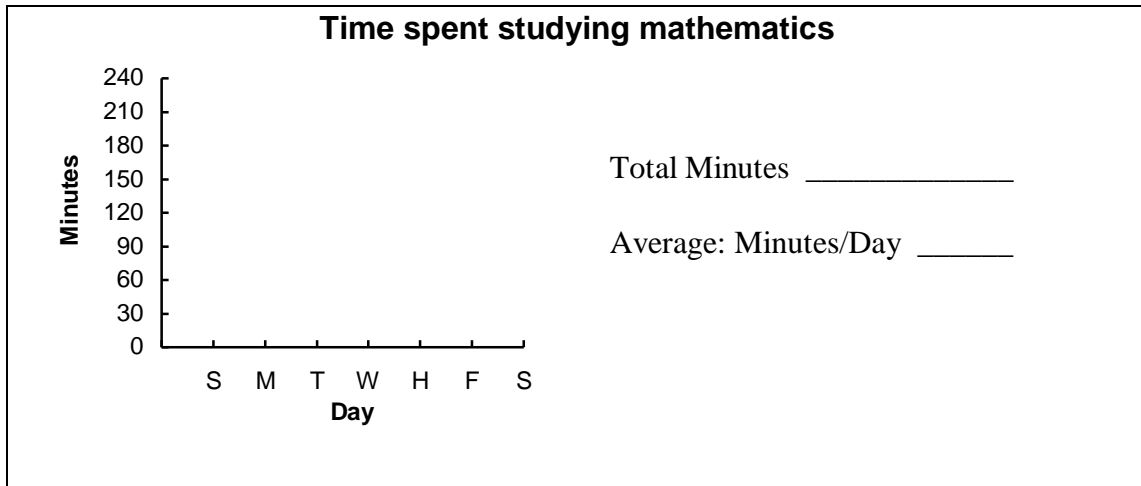
- (d) Find any holes.

- (e) Find x and y intercepts.

(f) Graph.



Math Problem 2: A glass contains 10 ounces of a liquid that is 12% alcohol. How much water should be added to reduce the alcohol concentration to 9%? Clearly define your variable.



Comments/Observations on the Course and your Progress (optional):