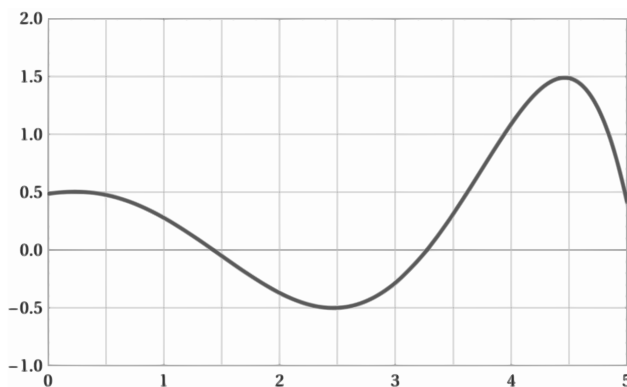


Math 1124: Homework 4

Due: Friday, September 24th

1) Gambler Gary plays in an all-night online poker game that begins at midnight and ends at 5 AM. The following rough graph shows Gary's financial status $f(x)$:



The horizontal axis represents the time of night after midnight and the vertical axis represents his current financial status in the game (in thousands of dollars). **Explain how you use the graph to answer each of the problems below:**

- During what period(s) of time is Gary in debt?
- During what period(s) of time is Gary losing money?
- When does Gary have the most amount of money? The least amount of money?
- What is $f(0)$ and what does that mean to Gary?
- What is $f(3.75)$ and what does that mean to Gary?
- Solve $f(t) = 0$ and describe what the solution(s) mean to Gary.

2) Bob had 7.9 pounds of mulch and Jack had 1.4 pounds of mulch. After Bob gave Jack some mulch, Bob had 3 times as much mulch as Jack. How much mulch did Bob give Jack? Solve this problem in two ways: with the aid of strip diagrams and with equations. Discuss how the two solution methods are related.