

Homework 7, Fall 2023

Homework 7 has questions 1 through 1 with a total of 30 points. This work is due **Saturday 21 October** at 11:59 PM.

1. Define a function saw = $x \in \mathbf{R} \mapsto x - \lfloor x \rfloor$.

10

- (a) Use Desmos to graph saw on the interval $[0, 5]$. Include your graph in your solution.¹

Solution:

10

- (b) Use the definition of continuity in the QRS to show that the function saw is continuous at $5/2$.

Solution:

10

- (c) Use the negation of the definition of continuity in the QRS to show that saw is not continuous at 2.

Solution:

¹If you know tools, would you call this a crosscut or a rip saw?