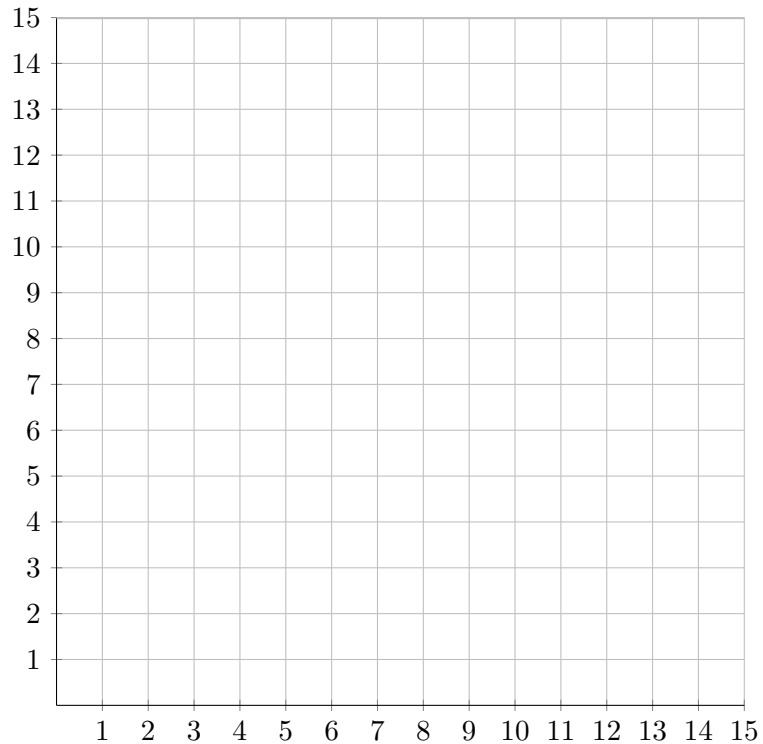


3. [10 points] Janice recently won \$10,000 through the Michigan lottery. She was so excited to have the extra spending money that she spent her winnings at a constant rate of \$2,000 per month. However, when she had \$4,000 remaining, she decided to curb her spending to make the money last, and she decreased her spending to a constant rate of \$500 per month until she spent all of her winnings. Let  $W(m)$  be the remaining amount of money, in thousands of dollars, that Janice has left from her lottery winnings  $m$  months after she wins the money.
- a. [4 points] Draw a graph of your function  $W(m)$ . Be sure to label your axes (including units) along with any important points, including the beginning and end of different pieces of your graph.



- b. [1 point] After how many months does she spend all of her winnings?
- c. [5 points] Find a piecewise-defined formula for  $W(m)$  on the appropriate domain in the context of the problem.

$$W(m) = \begin{cases} \text{_____} & \text{if } \text{_____} \\ \text{_____} & \text{if } \text{_____} \end{cases}$$