

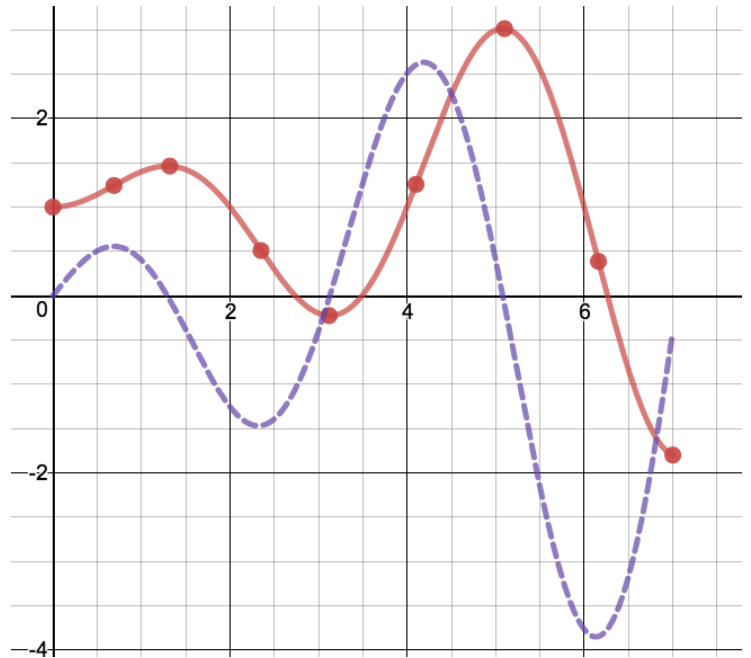
1. Seven Easy Pieces: Part II

You will need three different color markers for this task

- (a) Use color (a) to make the the 4 by 4 grid.
- (b) Use color (b) write the descriptions of $f(x)$ from yesterday and draw the seven pieces.

	concave up	concave down	no concavity
increasing	??	??	??
decreasing	??	??	??
constant	—	—	??

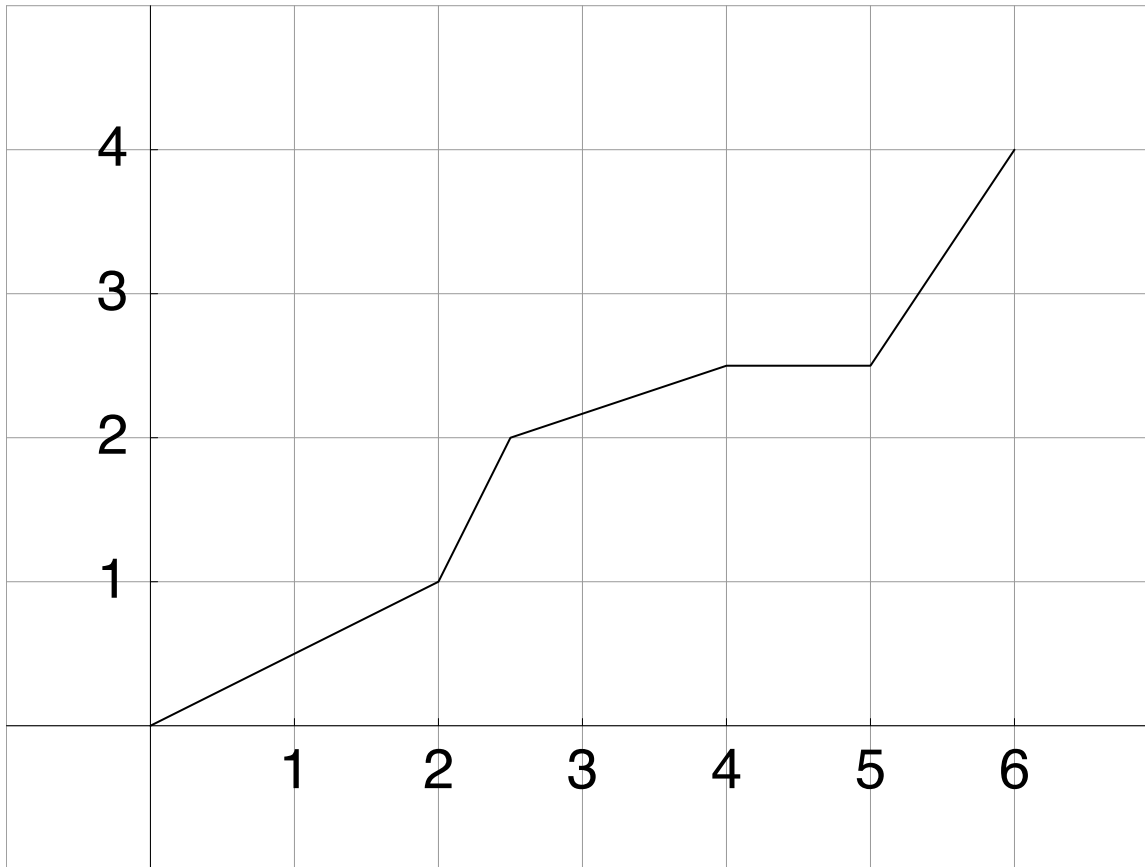
The graph at the right shows $f(x)$ our amount function (solid) and its rate function, $f'(x)$ (dashing). Let's extend the table with information about $f'(x)$, the rate function. On your whiteboard, use a *the third color* to complete your table by:



- (c) *Rate Function Descriptions:* filling in the six f' ??? entries with descriptions of what is going on in the rate function for each row and each column.

	f' ??? concave up	f' ??? concave down	f' ??? no concavity
f' ??? increasing	??	??	??
f' ??? decreasing	??	??	??
f' ??? constant	—	—	??

2. Consider this graph of $f(x)$. Using the graph white board, draw an accurate graph of $f'(x)$.



3. Is $\sqrt{2}$ a rational number? Explain how you know your answer is correct.