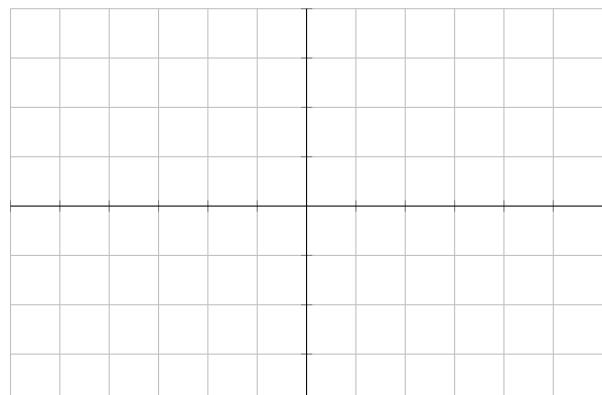
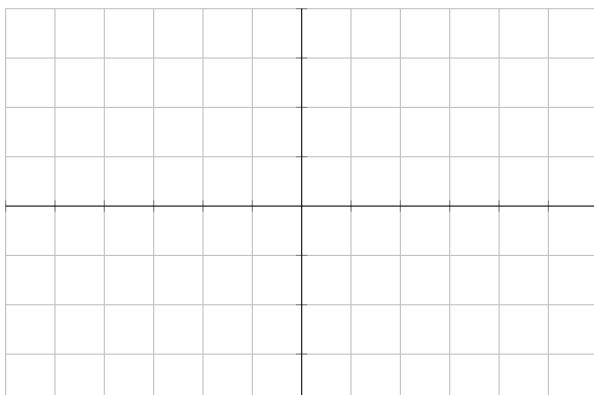
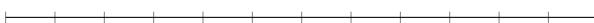
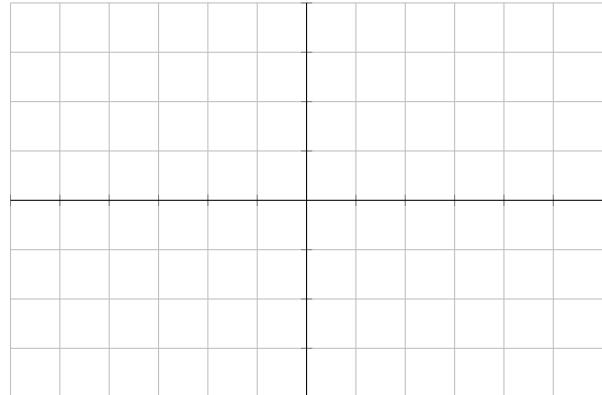
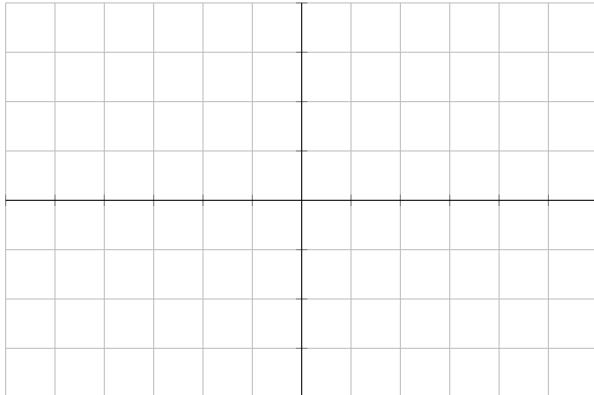
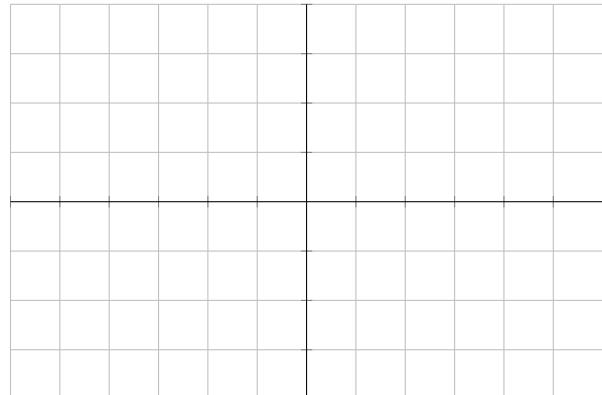
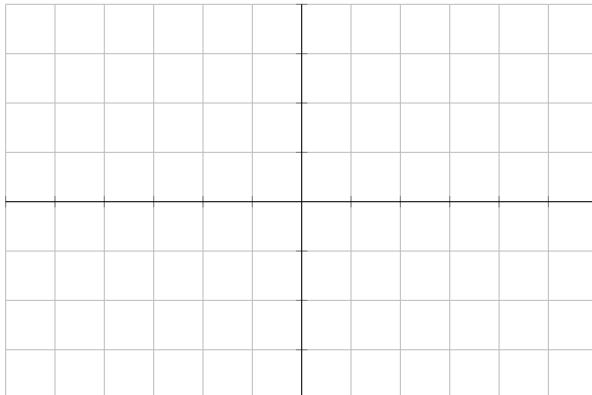
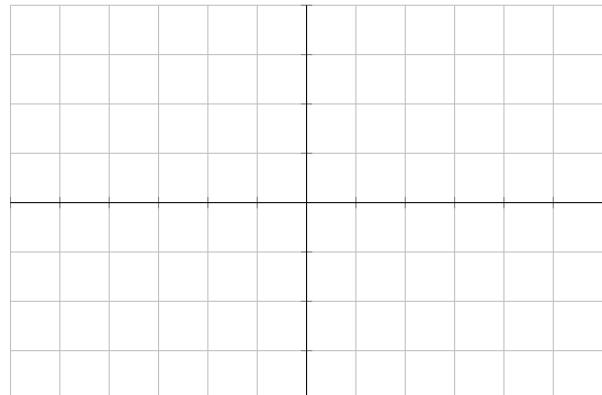
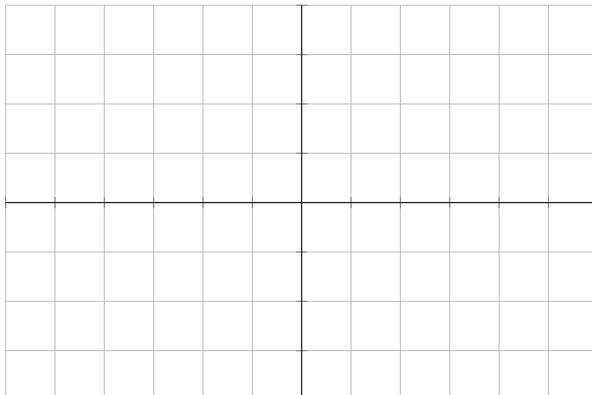


Highest and lowest points

For each of the graphs below:

1. Mark the very highest point and the very lowest point of $f(x)$.
2. Mark any points that are “locally” the highest or lowest.
3. On the number line below the graph, mark any x -values where $f'(x)$ would equal 0.
4. On the number line below the graph, mark any x -values where $f'(x)$ would not exist.
5. On the number line below the graph, highlight the intervals where $f'(x) < 0$.
6. In a different color, highlight the intervals where $f'(x) > 0$.





Now some questions for you:

1. What connections do you see between the highest and lowest points you marked on the graph and the locations you marked on the number line?
2. What connections do you see between the highlights you made on the number line and the x -values where either $f'(x) = 0$ or $f'(x)$ does not exist?
3. Which blank boxes can you fill in in the table below?

$f(x)$	Positive	Negative				
$f'(x)$			Positive	Negative		
$f''(x)$					Positive	Negative