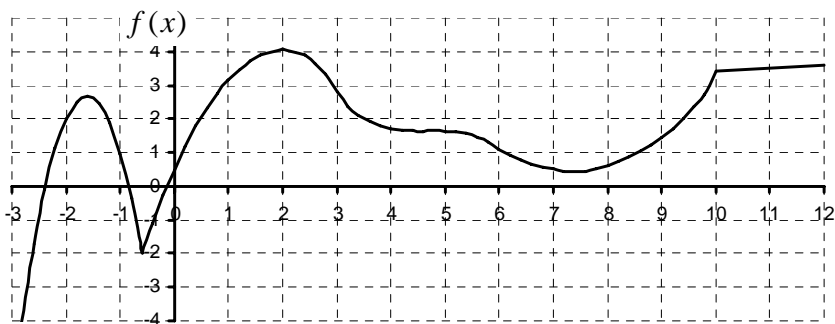


CRITICAL POINTS - PART 1

1. Use the graph of $f(x)$ shown below with domain $[-3,12]$ to find the following:



- Find the values of x where $f'(x) = 0$.
- Find the values of x where $f'(x)$ is undefined.
- Find the inflection points of $f(x)$.
- Find all the local maximums and minimums of $f(x)$.
- Find all the global maximums and minimums of $f(x)$.

2. Using the graph and your answers to the questions above, do the following:

- Label all the critical points on a number line. Determine the sign of $f'(x)$ between each critical point. How does the information on this number line help you determine which critical points correspond to local maximums, minimums, or neither?

- Label all the points on a number line where $f''(x)$ is either zero or undefined. Determine the sign of $f''(x)$ between each marked point. How does the information on this number line help you determine which points correspond to inflection points?