

Due 24 Oct, at start of recitation. Write up your solution carefully.

1. Define $f(x) = ax^2 + bx + c$, where $a \neq 0$. Find the intervals where $f(x)$ is increasing or decreasing. Does $f(x)$ have an absolute maximum or absolute minimum on $(-\infty, +\infty)$? If so, where are they?

HINT: you may want to consider the cases $a > 0$ and $a < 0$ separately. Don't be intimidated by the parameters.