Let $f(x) = x^4 + 6x^3 + 12x^2 + 8x + 1$

1. Find the critical points of f. (Hint: One is $x = -2$)
2. On which intervals is f increasing? decreasing?
3. Find the inflection points of f
4. On which intervals is f concave up? concave down?
5. Sketch a graph of $y = f(x)$, and verify your graph by using technology