State whether the function satisfies MVT on the given interval. If so, then find c that satisfies the conclusion for $f(x) = x^2 - 3x + 4$ on [-2, 5]

Find critical points, relative extrema, inflection points, intervals of increasing decreasing, intervals of concavity, x-intercepts & y-intercepts of each:

a) $f(x) = x^3(x - 2)$

b) $f(x) = x(x - 1)^2$

Use the graph of f to estimate the values of c that satisfy the conclusion of the mean value theorem on [-4, 4]
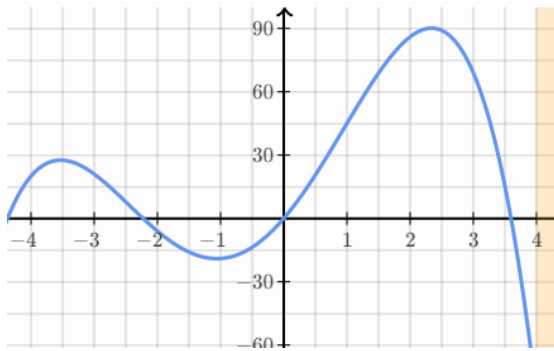
Find the limit of each:

a) $\lim\limits_{x \to \infty} \dfrac{5x+2}{x-1}$

b) $\lim\limits_{x \to \infty} \dfrac{5x^2+2}{x^5-2x+3}$

c) $\lim\limits_{x \to \infty} \dfrac{\sqrt{4x^2-2x+1}}{2x+3}$