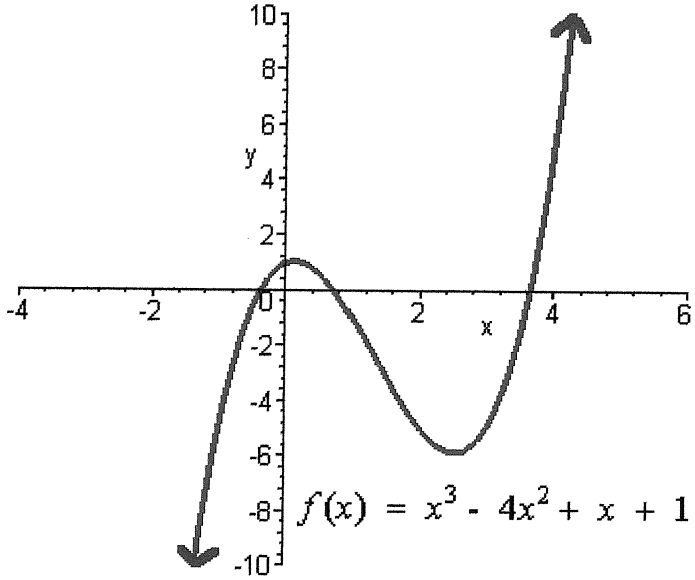
Question: The following is the graph of y = f(x). List the largest intervals over which f ' > 0 (f is increasing.). List the largest intervals over which f ' < 0 (f is decreasing.) Round values to the nearest thousandth.



a) f ' > 0 (increasing): $(-\infty, 1.065)$, $(-5.879, \infty)$
f ' < 0 (decreasing): $(1.065, -5.879)$

b) f ' > 0 (increasing): $(-\infty, 1.065)$, $(-5.879, \infty)$
f ' < 0 (decreasing): $(0.131, 2.535)$

c) f ' > 0 (increasing): $(-\infty, 0.131)$, $(2.535, \infty)$
f ' < 0 (decreasing): $(0.131, 2.535)$

d) f ' > 0 (increasing): $(-\infty, 0.131)$, $(2.535, \infty)$
f ' < 0 (decreasing): $(1.065, -5.879)$

Question: Find all of the critical points for the following function y = h(x).. Then determine whether the function attains a relative minimum or a relative maximum at each critical point using the first derivative test.

$$h(x) = x^4 - 6x^2 - 10$$

a) max at $-\sqrt{3}$, min at 0, max at $\sqrt{3}$

b) min at $-\sqrt{3}$, max at 0, min at $\sqrt{3}$

c) min at $-\frac{\sqrt{2}}{2}$, max at 0, min at $\frac{\sqrt{2}}{2}$

d) max at $-\frac{\sqrt{2}}{2}$, min at 0, max at $\frac{\sqrt{2}}{2}$