

Key

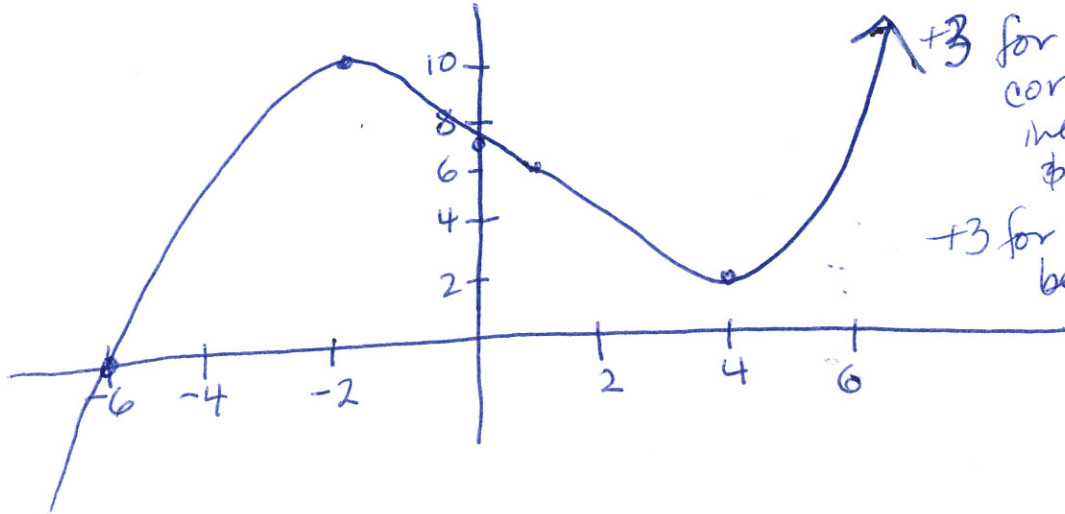
Elements of Calculus I, MATH 180 Quiz 8
Janet Vassilev

(1) Suppose $f(x)$ is a function satisfying the following:

- $f(x)$ has an x -intercept at $(-6, 0)$ and a y -intercept at $(0, 7)$.
- $f(x)$ has no horizontal or vertical asymptotes.
- $f(x)$ is increasing on $(-\infty, -2)$ and $(4, \infty)$ and decreasing on $(-2, 4)$.
- $f(x)$ has a relative maximum at $(-2, 10)$ and a relative minimum at $(4, 2)$.
- $f(x)$ is concave down on $(-\infty, 1)$ and concave up on $(1, \infty)$.
- $f(x)$ has an inflection point at $(1, 6)$.

Graph $f(x)$.

out of 8



+2 for graphing all pts
+3 for having correct portions increasing & decreasing
+3 for concavity being correct

Which one of the following graphs satisfies the following:

- $f(x)$ has a horizontal asymptote $y = -3$.
- $f(x)$ is increasing on $(-\infty, -1)$ and decreasing on $(-1, \infty)$.
- $f(x)$ has a relative maximum at $(-1, 3)$.
- $f(x)$ is concave up on $(-\infty, -1)$ and $(-1, \infty)$.

out of 2

