

AP CALCULUS AB

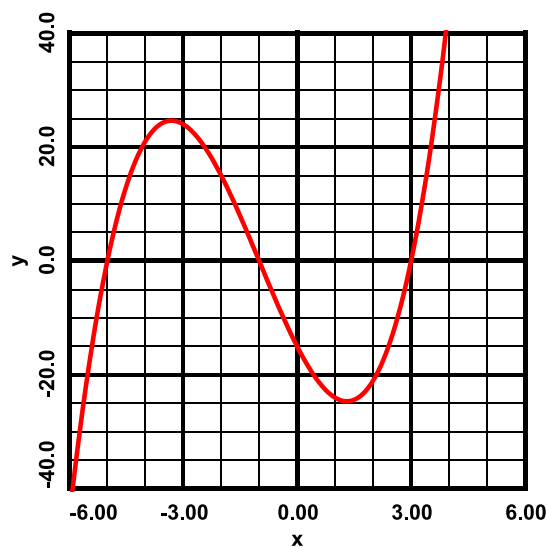
For problems 1 through 3,

- calculate $f'(x)$ and $f''(x)$
- find the coordinates of any relative maxima and minima
- find the coordinates of any inflection points
- state, in interval notation, the x – intervals where $f(x)$ is concave up and concave down.

Justify all answers with values of $f(x)$, $f'(x)$ and/or $f''(x)$.

1)

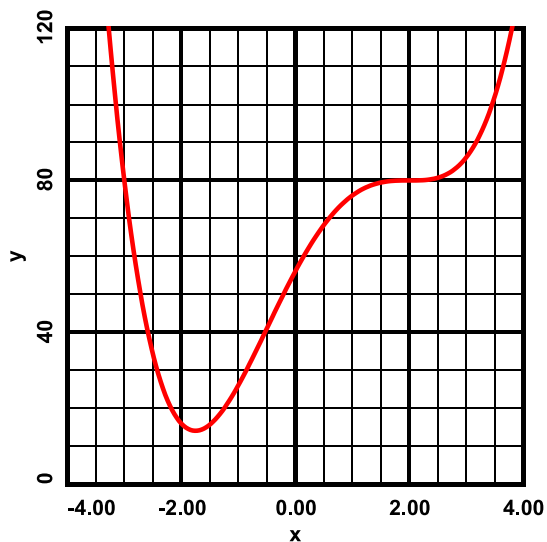
$$f(x) = x^3 + 3x^2 - 13x - 15$$



ANALYSIS OF CURVES

2)

$$f(x) = (x + 3)(x - 2)^3 + 80$$



3)

$$f(x) = (x + 3)(x - 2)^4 + 40$$

