

Graph the function with these properties:

$$f'(x) = 0 \text{ when } x = 0, \pm 4$$

$$f'(x) \text{ DNE when } x = \pm 2$$

$$f'(x) > 0 \text{ on } (-4, -2) \cup (0, 2) \cup (4, \infty)$$

$$f'(x) < 0 \text{ on } (-\infty, -4) \cup (-2, 0) \cup (2, 4)$$

$$f(x) \text{ is continuous on } (-\infty, \infty)$$

$$f(0) = -2$$

$$\lim_{x \rightarrow \pm\infty} f(x) = 4$$

- $f(x)$
- $f'(x)$
- $f''(x)$
- $\lim_{x \rightarrow \pm \infty} f(x)$
- Continuity

