

Quick Review: Derivatives of Absolute Values

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$$\frac{d}{dx} |x| = \frac{|x|}{x}$$

Example

$$\frac{d}{dx} |2x-3| = \frac{|2x-3|}{2x-3} * 2$$

Rule + Formula
to keep track
of.

$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases} \quad \text{Pure definition of absolute value}$$

Example 2

$$f(x) = |4x^2 - 3|$$
$$f'(x) = \frac{|4x^2 - 3|}{4x^2 - 3} * 8x \quad \left. \vphantom{f'(x)} \right\} \text{my guess? } \checkmark$$