Calculus I
§ **Miscellaneous derivatives involving logarithms, part 3**

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Example

Compute the given derivative.

$$
\begin{aligned}
\frac{d}{dx}\left(\ln \sqrt[3]{4x-1}\right) &= \frac{d}{dx}\left(\ln(4x-1)^{\frac{1}{3}}\right) \\
&= \frac{d}{dx}\left(\frac{1}{3}\ln(4x-1)\right) \\
&= \frac{1}{3}\frac{d}{dx}\left(\ln(4x-1)\right) \\
&= \frac{1}{3}\frac{(4x-1)'}{4x-1} \\
&= \frac{4}{3(4x-1)}
\end{aligned}
$$