$$y = \ln(2x^2 - 8)$$

$y = \ln u \qquad$ und $\qquad u = 2x^2 - 8$

$y' = \dfrac{1}{u} \qquad\qquad\qquad u' = 4x$

$y' = \dfrac{1}{u} \bullet 4x$

$\quad = \dfrac{1}{2x^2 - 8} \cdot 4x$

$\quad = \dfrac{4x}{2(x^2 - 4)}$

$\quad = \dfrac{2x}{x^2 - 4}$