What is the derivative quotient of $\frac{6x-5}{2x-1}$ ?

**Solution:**

The rule states that the derivative of $\frac{f(x)}{g(x)}$ is

$$\left(\frac{\mathrm{f(x)}}{\mathrm{g(x)}}\right)' = \frac{\mathrm{f'(x)g(x) - g'(x)f(x)}}{\mathrm{g^2(x)}}$$

For $\frac{6x-5}{2x-1}$ it will be

$$\left(\frac{6x-5}{2x-1}\right)' = \frac{(6x-5)'(2x-1) - (2x-1)'(6x-5)}{(2x-1)^2} = \frac{6(2x-1) - 2(6x-1)}{(2x-1)^2}$$
$$= \frac{12x - 6 - 12x + 2}{(2x-1)^2} = \frac{-4}{(2x-1)^2}$$

**Answer:** $\frac{-4}{(2x-1)^2}$