4. $y = \underbrace{x^3}_{P}\underbrace{\operatorname{arccsc}(x^2-1)}_{Q} - \frac{1}{2}\ln(3x^2-4)$

$P' = 3x^2 \qquad Q' = \frac{-1}{|x^2-1|\sqrt{(x^2-1)^2-1}} \cdot \frac{d}{dx}(x^2-1)$

$$Q' = \frac{-2x}{|x^2-1|\sqrt{(x^2-1)^2-1}}$$

$P'Q + PQ'$

$$y' = 3x^2 \operatorname{arccsc}(x^2-1) + x^3\left(\frac{-2x}{|x^2-1|\sqrt{(x^2-1)^2-1}}\right) - \frac{1}{2}\cdot\frac{1}{3x^2-4}\cdot\frac{d}{dx}(3x^2-4)$$

$$= 3x^2 \operatorname{arccsc}(x^2-1) - \frac{2x^4}{|x^2-1|\sqrt{(x^2-1)^2-1}} - \frac{6x}{2(3x^2-4)}$$

$$= x\left[3x \operatorname{arccsc}(x^2-1) - \frac{2x^3}{|x^2-1|\sqrt{(x^2-1)^2-1}} - \frac{3}{3x^2-4}\right]$$