The notation $\stackrel{\text{QR}}{\Rightarrow}$ indicates the use of the Quotient Rule.

$$y = \frac{t^2 + 5}{t^4 - 2t^2 + 3} \quad \stackrel{\text{QR}}{\Rightarrow}$$

$$
\begin{aligned}
y' &= \frac{(t^4 - 2t^2 + 3)(2t) - (t^2 + 5)(4t^3 - 4t)}{(t^4 - 2t^2 + 3)^2} \\
&= \frac{2t[(t^4 - 2t^2 + 3) - (t^2 + 5)(2t^2 - 2)]}{(t^4 - 2t^2 + 3)^2} \\
&= \frac{2t(t^4 - 2t^2 + 3 - 2t^4 - 10t^2 + 2t^2 + 10)}{(t^4 - 2t^2 + 3)^2} = \frac{2t(-t^4 - 10t^2 + 13)}{(t^4 - 2t^2 + 3)^2}
\end{aligned}
$$