(34) $\frac{d}{dx}\int_{x^2}^{x^4}\sqrt{t}\,dt = \frac{d}{dx}\left(\int_0^{x^4}\sqrt{t}\,dt - \int_0^{x^2}\sqrt{t}\,dt\right)$

$= \sqrt{x^4}\cdot 4x^3 - \sqrt{x^2}\cdot 2x$

$4x^5 - 2x|x|$