

$$\int \frac{3x^2 - 2x + 1}{\sqrt{x}} dx = \int \frac{3x^2 dx}{x^{1/2}} - \int \frac{2x dx}{x^{1/2}} + \int \frac{1}{x^{1/2}} dx$$

Aplicamos propiedad de los exponentes

$$\Rightarrow 3 \int x^{2-1/2} dx - 2 \int x^{1-1/2} dx + \int x^{-1/2} dx$$

$$\Rightarrow 3 \int x^{3/2} dx - 2 \int x^{1/2} dx + \int x^{-1/2} dx$$

$$\Rightarrow 3 \left( \frac{x^{3/2+1}}{\frac{3}{2}+1} \right) - 2 \left( \frac{x^{1/2+1}}{\frac{1}{2}+1} \right) + \frac{x^{-1/2+1}}{-\frac{1}{2}+1} + C$$

$$\Rightarrow \frac{3 x^{5/2}}{\frac{5}{2}} - \frac{2 x^{3/2}}{\frac{3}{2}} + \frac{x^{1/2}}{\frac{1}{2}} + C$$

$$\Rightarrow \frac{6}{5} x^{5/2} - \frac{4}{3} x^{3/2} + 2 x^{1/2} + C$$

$$\Rightarrow \frac{6}{5} \sqrt{x^5} - \frac{4}{3} \sqrt{x^3} - 2\sqrt{x} + C$$