Calcoliamo

$$\int_{-1}^{2} 7x^2(x^3+1)^{-\frac{1}{2}}dx.$$

Osserviamo che la derivata del radicando $x^3+1$ vale $3x^2$) e dunque

$$\begin{aligned}\int_{-1}^{2} 7x^2(x^3+1)^{-\frac{1}{2}}dx &= \int_{-1}^{2} \frac{7x^2}{\sqrt{x^3+1}}dx = \frac{7}{3}\int_{-1}^{2} \frac{3x^2}{\sqrt{x^3+1}}dx = \\ &= \frac{7}{3}\left[2\sqrt{x^3+1}\right]_{-1}^{2} = \frac{7}{3}\cdot 6 = 14.\end{aligned}$$