Friday, November 30, 2018 9:29 AM

$$\int_1^3 4t^{3/2} + t^{-1/2}\,dt$$

$$4 \cdot \frac{2}{5} t^{5/2} + \frac{2}{9} t^{9/2} \Big|_1^3$$

$$= -\left(\frac{8}{5} t^{5/2} + \frac{2}{9} t^{9/2} \right) \Big|_1^3$$

$$\int_1^{27} \frac{t+1}{\sqrt{t}}\,dt = \int \sqrt{t} + \frac{1}{\sqrt{t}}\,dt$$

$$\int t^{1/2} + t^{-1/2}\,dt = \frac{2}{3}t^{3/2} + 2t^{1/2}\Big|_1^{27}$$

$$\frac{2}{3}(27)^{3/2} + 2(27)^{1/2} - \left(\frac{2}{3} + 2\right)$$

$$\frac{2}{3}(27)^{3/2} + 2(27)^{1/2} - 2\frac{2}{3}$$

(29) $\int_{-2}^{-1} \frac{1}{x^3}\,dx = \int_{-2}^{-1} x^{-3}\,dx$

$-\frac{1}{2}x^{-2}\Big|_{-2}^{-1} = -\frac{1}{2}\left(\frac{1}{(-1)^2} - \frac{1}{(-2)^2}\right)$

$-\frac{1}{2}\left(1 - \frac{1}{4}\right) = -\frac{1}{2}\cdot\frac{3}{4} = -\frac{3}{8}$

nDerv(35.6 − 22.1x^0.16, x, 20)

°F / mph

At 32°F, the wind chill goes down ~0.285 °F if wind speed increases from 20 to 21 mph

c) $\frac{dw}{dt} = \frac{dw}{dv} \cdot \frac{dv}{dt}$