

12.07

tisdag 20 december 2022

13:29

$$a) \int e^{x^2} \cdot 2x \, dx = \int f(g(x)) \cdot g'(x) \, dx = f(g(x)) + C = e^{x^2} + C$$

$$\boxed{D e^{x^2} = e^{x^2} \cdot D x^2 = e^{x^2} \cdot 2x}$$

$$b) \int e^{x^2} \cdot 2x \, dx = \left[ \begin{array}{l} t = x^2 \quad x = \sqrt{t} \\ \frac{dt}{dx} = 2x \quad dt = 2x \, dx \end{array} \right] = \int e^t \, dt = e^t + C = \underline{\underline{e^{x^2} + C}} \quad \text{v.s.v}$$