Opgave 002

$$f(x) = 6x^2 + 2x$$

Integrer funktionen f

$$F(x) = \int f(x)\,dx$$
$$F(x) = \frac{6}{3}x^3 + \frac{2}{2}x^2 + C$$
$$F(x) = 2x^2 + x^2 + C$$

Bestem F sådan at F(1)=8

$$F(1) = 8$$
$$2(1)^2 + (1)^2 + C = 8$$
$$2 + 1 + C = 8$$
$$C = 8 - 2 - 1$$
$$C = 5$$

$$\underline{F(x) = 2x^2 + x^2 + 5}$$