$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$$

- $\int \sqrt{3x}\, dx$

$$\int \sqrt{3 \cdot x}\, dx = \int \sqrt{3} \cdot \sqrt{x}\, dx = \sqrt{3} \cdot \int \sqrt{x}\, dx =$$

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