

$$4) \quad x^2 \rightarrow nx^{n-1}$$

$$1) \quad q x^2 = q \frac{d}{dx} [x^2] = \frac{d}{dx} [x^n] \text{ is } nx^{n-1} \quad n \geq 2$$

$$q(2x) = 19x$$

$$2) \quad x^2 + \sin 5x = \quad \sin x = \cos x$$

$$\frac{d}{dx} [\sin 5x] = \cos 5x$$

$$\frac{d}{dx} [5x] = \cos 5x = \frac{5 \cos 5x}{5}$$

$$5x^2 \cos 5x$$

$$3) \quad x e^{2x} = \frac{1}{2} x e^{2x} - \frac{1}{2} \int e^{2x} =$$

$$\frac{1}{2} x e^{2x} - \frac{1}{4} e^{2x} + C$$

b1)