

⑥

$$\textcircled{1} \int x^8 + 4x^3 + 5x - 1 \, dx.$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C$$

$$\frac{x^9}{9} + \frac{4x^4}{4} + \frac{5x^2}{2} - 1x + C$$

$$\textcircled{11} \int 5x^2(x^3 + 2x + 1) \, dx.$$

$$5x^2(2x^4 + 1) \, dx.$$

$$\frac{5x^2}{2}$$

$$\textcircled{14} \int 5 \sin 3x \, dx.$$

$$5 \int \sin 3x \, dx.$$

$$= 5 \left(\frac{1}{3} \sin 3x \right) + C.$$

$$= \frac{5}{3} \sin 3x + C$$

$$\textcircled{14} \int_0^5 (x+5)(x+1) \, dx$$

$$\int_0^5 \cancel{5x} x^2 + 5x + 5 \, dx$$

$$= \left[\frac{x^3}{3} + \frac{5x^2}{2} + 5x \right]_0^5$$