

$$\textcircled{6} \int (3x^2 + 8x + 5)^6 (3x + 4) \cdot dx$$

$$\frac{1}{2} \int (3x^2 + 8x + 5)^6 \cdot 2(3x + 4) \cdot dx$$

$$\frac{1}{2} : \frac{1}{7} (3x^2 + 8x + 5)^7 + c$$

$$\textcircled{7} \int (x^2 + 3)^2 \cdot x \cdot dx \Rightarrow \frac{1}{2} \int (x^2 + 3)^2 \cdot 2x \cdot dx$$

$$= \frac{1}{2} \cdot \frac{1}{3} (x^2 + 3)^3 + c \Rightarrow \frac{1}{6} (x^2 + 3)^3 + c$$

$$\textcircled{8} \int (x^2 + 3)^2 \cdot dx$$

ملاحظة: إذا كانت متعة داخل القوس فيها نفس متغير (x) نفتح القوس ونكامل كل القواسم باقية.

$$\int (x^4 + 6x^2 + 9) \cdot dx$$

$$= \frac{1}{5} x^5 + 2x^3 + 9x + c$$

(7)

$$\textcircled{9} \int (x^2+2)^3 x \cdot dx$$

~~$$\frac{3}{2} \int (x^2+2)$$~~

$$3 \int (x^2+2) x \cdot dx$$

$$3 \cdot \frac{1}{2} \int (x^2+2) 2x \cdot dx$$

$$= \frac{3}{2} \cdot \frac{1}{9} (x^2+2)^9 + c$$

$$= \frac{3}{18} (x^2+2)^9 + c = \frac{1}{6} (x^2+2)^9 + c$$

$$\textcircled{1} \int -3 dx \quad \textcircled{2} \int 1 \cdot dx$$

Chapter 9

$$\textcircled{3} \int \sqrt[7]{x^5} \cdot dx \quad \textcircled{4} \int \frac{1}{\sqrt[3]{x}} \cdot dx$$

$$\textcircled{5} \int x^{-2} \cdot dx \quad \textcircled{6} \int -5x^2 \cdot dx$$

$$\textcircled{7} \int (3\sqrt{x} + 2\sqrt[3]{x}) \cdot dx \quad \textcircled{8} \int (x^2+2\sqrt[3]{x} - 7x^{-\frac{1}{2}} + 8) \cdot dx$$

$$\textcircled{9} \int (x^2+x+5)^5 (2x+1) \cdot dx$$

$$\textcircled{10} \int (x^3+1)^{\frac{3}{2}} x^2 \cdot dx \quad \textcircled{11} \int (x^2+1)^2 \cdot dx$$

$$\textcircled{12} \int (x^2+1)^3 5x \cdot dx$$

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