

$$\textcircled{13} \int \frac{7}{x^2 - 6x + 25} dx$$

$$\int \frac{7}{x^2 - 6x + 9 + 25 - 9} dx$$

$$\int \frac{7}{(x-3)^2 + 16} dx \quad \begin{array}{l} u = x-3 \\ du = dx \\ a = 4 \end{array}$$

$$7 \int \frac{dx}{u^2 + 4^2}$$

$$7 \cdot \frac{1}{a} \arctan \frac{u}{a} + C$$

$$\boxed{\frac{7}{4} \arctan \frac{x-3}{4} + C}$$

$$\textcircled{14} \int \frac{x^2 - x}{x+1} dx$$

$$\begin{array}{r} x-2 + \frac{2}{x+1} \\ x+1 \overline{) x^2 - x + 0} \\ \underline{\ominus x^2 + x} \\ -2x + 0 \\ \underline{\oplus 2x + 2} \\ 2 \end{array}$$

$$\int x-2 dx + \int \frac{2}{x+1} dx \quad \begin{array}{l} u = x+1 \\ du = dx \end{array}$$

$$\frac{1}{2}x^2 - 2x + 2 \int \frac{du}{u}$$

$$\boxed{\frac{1}{2}x^2 - 2x + 2 \ln|x+1| + C}$$

$$\textcircled{15} \int 1 + \tan x dx$$

$$\int 1 dx + \int \tan x dx$$

$$x + \int \frac{\sin x}{\cos x} dx \quad \begin{array}{l} u = \cos x \\ du = -\sin x dx \\ -du = \sin x dx \end{array}$$

$$x + \int \frac{du}{u}$$

$$\boxed{x - \ln|\cos x| + C}$$

$$\textcircled{16} \text{ OMIT}$$

$$\textcircled{17} \int \frac{x^4 - 2x^3 + 3x - 1}{x} dx$$

$$\int x^3 - 2x^2 + 3 - \frac{1}{x} dx$$

$$\boxed{\frac{1}{4}x^4 - \frac{2}{3}x^3 + 3x - \ln|x| + C}$$

$$\textcircled{18} \int \sec^2(3x) dx \quad u = 3x$$

$$du = 3 dx$$

$$\frac{1}{3} \int \sec^2 u du$$

$$\frac{1}{3} du = dx$$

$$\frac{1}{3} \tan u + C$$

$$\boxed{\frac{1}{3} \tan(3x) + C}$$