

$$\frac{1}{x^2+x}$$

$$\left[\frac{1}{x(x+1)} = \frac{A}{x} + \frac{B}{x+1} \right] (x)(x+1)$$

$$= A(x+1) + B$$

$$1 = Ax + \quad + Bx$$

$$= Ax + Bx + A$$

$$\begin{cases} A + B = 0 \\ A = \end{cases}$$

$$\boxed{A = -1}$$

$$A + B = 0$$

$$+ B = 0$$

$$B = 0 -$$

$$\boxed{B = 1}$$

Answer

$$\frac{1}{x^2+x} = -\frac{1}{x} - \frac{1}{x+1}$$