

Conditions

actor this:

$$a^5 + a + 1$$

Please show your work

Solution

$$\begin{aligned} a^5 + a + 1 &= a^5 + a + 1 + a^4 - a^4 + a^3 - a^3 = a^3(a^2 + a + 1) - a^4 - a^3 + a + 1 \\ &= (a^3 - a^2 + 1)(a^2 + a + 1) \end{aligned}$$