Algebra I – autumn 2024 – Homework 12

1. Express the number
$$\frac{1}{2\alpha^4 + 11\alpha^3 + 5\alpha^2 - 5\alpha - 6}$$
without using other than rational numbers in denominators, provided that the number α satisfies the equality $\alpha^4 + 6\alpha^3 + 3\alpha^2 = 3\alpha + 3$.