

1.3 1)

$$f(2) = 5 \Rightarrow 2 \cdot 2 + \alpha = 5 \Rightarrow \boxed{\alpha = 1}$$

1.3 2)

$$f(-3) = 9 \Rightarrow (-3)^2 + 3(-3) - 2\alpha + 1 = 9 \Rightarrow \cancel{9} - \cancel{9} - 2\alpha + 1 = 9 \Rightarrow -2\alpha = 8 \Rightarrow \boxed{\alpha = -4}$$

1.3 3)

$$f(2) = 1 \Rightarrow \frac{4 \cdot 2 + \alpha}{3 \cdot 2 + 1} = 1 \Rightarrow \frac{8 + \alpha}{7} = 1 \Rightarrow 8 + \alpha = 7 \Rightarrow \boxed{\alpha = -1}$$

1.3 4)

$$f(1) = -4 \Rightarrow \frac{2 \cdot 1 + \alpha}{1^2 - \alpha} = -4 \Rightarrow \frac{2 + \alpha}{1 - \alpha} = -4 \Rightarrow 2 + \alpha = -4 + 4\alpha \Rightarrow$$

$$\Rightarrow \alpha - 4\alpha = -4 - 2 \Rightarrow -3\alpha = -6 \Rightarrow \boxed{\alpha = 2}$$