数学B演習 No. 5

2年＿＿組 ＿＿番 氏名＿＿＿＿＿＿＿＿＿＿

1 次の漸化式を解け。

(1) $a_{n+1} = \dfrac{a_n}{3a_n + 1},\ a_1 = \dfrac{1}{4}$

Ans. $a(n) = \dfrac{1}{3 \cdot n + 1}$

(2) $a_{n+1} = \dfrac{2}{n+1}\, a_n + \dfrac{1}{(n+1)!},\ a_1 = 1$

Ans. $a(n) = \dfrac{2^n - 1}{n!}$

2 次の漸化式を解け。

(1) $a_{n+1} = 2a_n + n - 1,\ a_1 = 1$

Ans. $a(n) = 2^n - n$

(2) $a_{n+2} - 5a_{n+1} + 6a_n = 6n,\ a_1 = 1,\ a_2 = 1$

Ans. $a(n) = \dfrac{-15 \cdot 2^{n+1} + 7 \cdot 3^n + 18 \cdot n + 27}{6}$