

1 解答

[問 1] $x^8 - 8x^7 + 28x^6 - 56x^5 + 70x^4 - 56x^3 + 28x^2 - 8x + 1$

[問 2] $(x - 44)(x - 46)$

[問 3] $x = -1, 2 \pm \sqrt{3}i.$

[問 4] $a = 0, b = 16,$ 他の解: $1 - \sqrt{3}i, -2.$

[問 5] (証明略)

2 解答

[問 1] $Y_{n+1} = 10Y_n + X_{n+1}$

[問 2] $p_{n+1} = \frac{1}{10}p_n + \frac{1}{10}$

[問 3] $p_{n+1} = \frac{1}{9} + \frac{4}{45} \left(\frac{1}{10} \right)^n$

[問 4] $\frac{2(10^n + 8)}{10^{n+1} + 8}$

3 解答

[問 1] (1) $\frac{1}{6}\vec{AB} + \frac{1}{2}\vec{AC}$

(2) $\frac{1}{4}\vec{AB} + \frac{3}{4}\vec{AC}$

(3) $\frac{1}{4}$

(4) $\frac{1}{3}$

[問 2] $\frac{4}{9}$

4 解答

[問 1] c

[問 2] (証明略)

[問 3] (証明略)

[問 4] $\frac{1}{e}$