

I · II · III · A · B
 (医学部生命科学科 · 医学部保健学科 · 工学部)

[I]

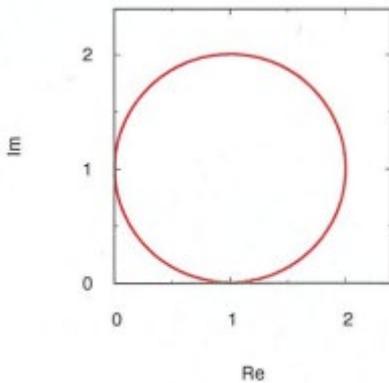
(1) $a_2 = 8$ $b_2 = 16$ $a_3 = 56$ $b_3 = 88$

(2) $a_n + b_n = 4 \cdot 6^{n-1}$ $a_n - b_n = -2 \cdot 4^{n-1}$

(3) $a_n = 2 \cdot 6^{n-1} - 4^{n-1}$ $b_n = 2 \cdot 6^{n-1} + 4^{n-1}$

[II]

(1)



(2) $k = 4 + 2\sqrt{2}$

[III]

(1) $t = \sqrt{ab}$

(2) $M = \frac{3}{4} - \frac{\sqrt{2}}{2}$

[IV]

(1) $\frac{1}{2}$

(2) $y = -(2 + \sqrt{2})x + \sqrt{2} + 1$

(3) $\frac{2}{3}$