

数 学

① **解答** (1)ア. $(x^2+x+1)(x^2-x+1)$ (2)イ. $-\frac{5}{4}$
(3)ウ. $2-\sqrt{3}$ (4)エ. -160 (5)オ. 1

② **解答** (1)ア. $\frac{(n-3)(n-4)}{n(n-1)}$ (2)イ. $\frac{6(n-3)}{n(n-1)}$
(3)ウ. $\frac{(n+1)(n-3)}{(n-1)(n-2)}$ (4)エ. 5 (5)オ. $5, 6$

③ **解答** (1)ア. $a_n = \frac{1}{3}n - \frac{1}{6}$ (2)イ. $\frac{3}{2}$ (3)ウ. $\frac{800}{3}$
(4)エ. 60 (5)オ. $\frac{1000}{3}$

④ **解答** (1)ア. 4 (2)イ. -5 (3)ウ. $a < -5, 4 < a$
(4)エ. $-5 < a < -4$ (5)オ. $12\sqrt{3} - \frac{16}{3}\pi$