

1.

(ア)  $\sqrt{5}$

(イ)  $8\sqrt{5}$

(ウ) 13

(エ) -17

(オ)  $\frac{5}{9}$

(カ)  $-\frac{1}{\sqrt{2}}$

(キ)  $\frac{4t}{1-t^2}$

(ク)  $5\sqrt{21}$

(工)  $\frac{\sqrt{5}+1}{2}$

(オ)  $\frac{-\sqrt{5}+1}{2}$

(カ)  $\frac{\alpha^{n-1}-\beta^{n-1}}{\alpha-\beta}$

(キ)  $\frac{\alpha^{n-1}-\beta^{n-1}}{\alpha^n-\beta^n}$

(ク)  $\frac{\sqrt{5}-1}{2}$

2.

(ア)  $\cos x$

(イ)  $\frac{1}{\cos \frac{k\pi}{4n}}$

(ウ)  $\tan \frac{k\pi}{4n}$

(エ)  $\tan \frac{\pi x}{4}$

(オ)  $\frac{2\log 2}{\pi}$

(カ)  $\frac{4}{\pi} \log(\sqrt{2}+1)$

3.

(ア)  $b_n + c_n$

(イ)  $b_n$

(ウ) 1