$$\frac{\sin(x+x^2)^n}{n!} \quad \frac{n}{x+x^2}$$

0, 0, 0

(2) $\sin z = z - \frac{1}{3!} z^3 + \frac{1}{5!} z^5$

1, 2, 5, 7, 10

(3) $1 + t^2 = (1-t)(1+t)$

$$\sum_{n=0}^{\infty} \frac{z^n}{(1+z)}$$

(4) $\tan(a+b) = \tan^{-1} C$

$a+b = \tan^{-1}(C)$

$\tan^{-1} k = a+b$

$\alpha = \frac{\tan a + \tan b}{1 - \tan a \tan b}$

(2) $\tan^{-1}\frac{1}{2} + \tan^{-1}\frac{1}{3} = \frac{\pi}{4}$

$\frac{\pi}{12}$

Formula above

$$\tan^{-1}\frac{\frac{1}{2}+\frac{1}{3}}{1-\frac{1}{6}} = \tan^{-1}\frac{\frac{5}{6}}{\frac{5}{6}} = \frac{\pi}{4}$$