

9 Dec 2013 ①

PAM
Lecture 10

$$S = \sum_{n=0}^{\infty} x^n = ?$$

$$1 + \cancel{x} + \cancel{x^2} + \dots = S$$

$$\cancel{x} + \cancel{x^2} + \cancel{x^3} \dots = xS$$

$$1 = S - xS$$

$$1 = S(1-x)$$

$$S = \frac{1}{1-x}$$