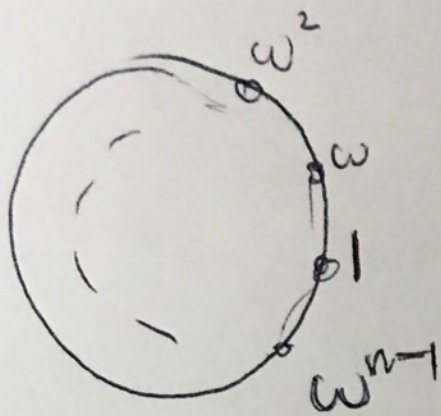


pow
2018-06 (2016 [redacted], Taegyun Kim).



$$\omega = \cos \frac{2\pi}{n} + i \sin \frac{2\pi}{n}$$

$1, \omega, \omega^2, \dots, \omega^{n-1}$ forms
regular n -gon on
complex plane.

$$\therefore \prod_{i=2}^n A_i A_i = \prod_{i=2}^n |1 - \omega^i|$$

$$= |(1 - \omega)(1 - \omega^2) \dots (1 - \omega^{n-1})|$$

On the other hand

$$(1 - \omega)(1 - \omega^2) \dots (1 - \omega^{n-1}) = 1 + \omega + \omega^2 + \dots + \omega^{n-1}$$

$$\therefore (1 - \omega)(1 - \omega^2) \dots (1 - \omega^{n-1}) = n$$

$$\therefore \prod_{i=2}^n A_i A_i = n$$