

$$\sin(z) = -4i$$

$$\sin(z) = \frac{\exp(iz) - \exp(-iz)}{2i}$$

$$\frac{\exp(iz) - \exp(-iz)}{2i} = -4i$$

$$| \cdot 2i$$

$$\exp(iz) - \exp(-iz) = 8$$

$$w = \exp(iz)$$

$$w - \frac{1}{w} = 8$$

⋮

$$w_1 = 4 + \sqrt{17}$$

$$w_2 = 4 - \sqrt{17}$$

$$\exp(z_1 + z_2) = \exp(z_1) \cdot \exp(z_2)$$

$$\exp(z - z) = \exp(z) \cdot \exp(-z)$$

$$1 = \exp(z) - \exp(-z)$$

$$\exp(\bar{z}) = 4 + \sqrt{17}$$

~~$$\exp(\bar{z}) = 4 + \sqrt{17}$$~~

$$z = x + iy$$

$$\bar{z} = \bar{x} - iy$$

$$\exp(\bar{z}) = \exp(-y) (\cos(x) + i \sin(x)) = 4 + \sqrt{17} + 0i$$

$$\exp(-y) \cos(x) = 4 + \sqrt{17} \quad \dots \quad y = -\log(4 + \sqrt{17})$$

$$\exp(-y) \sin(x) = 0 \quad \dots \quad x = k\pi, \quad k \in \mathbb{Z}$$



$$z = 2k\pi - i \log(4 + \sqrt{17}), \quad k \in \mathbb{Z}$$

$$\exp(iz) = 4 - \sqrt{17}$$

