

$$\sin^2 \theta = \frac{1 - \cos 2\theta}{2}, \quad \cos^2 \theta = \frac{1 + \cos 2\theta}{2}$$

$$\sin \theta \cos \theta = \frac{1}{2} \sin 2\theta$$

$$\begin{aligned} (2A) &= a \cdot \frac{1 - \cos 2\theta}{2} + \frac{1}{2}(a+b) \sin 2\theta + b^2 \cdot \frac{1 + \cos 2\theta}{2} \\ &= \frac{1}{2}(a+b) \sin 2\theta + \frac{1}{2}(b^2 - a) \cos 2\theta + \frac{1}{2}(a+b^2) \\ &= \frac{1}{2} \sqrt{(a+b)^2 + (b^2 - a)^2} \sin(2\theta + \alpha) + \frac{1}{2}(a+b^2) \end{aligned}$$

$$\frac{1}{2}(a+b^2) = 2$$

$$\frac{1}{2} \sqrt{(a+b)^2 + (b^2 - a)^2} = \sqrt{5}$$

⋮

이와 유사하게  $\frac{\pi}{20}, \frac{2\pi}{20}, \dots$

$$\begin{aligned} a \sin \theta + b \cos \theta &\stackrel{?}{=} \\ &= \sqrt{a^2 + b^2} \sin(\theta + \alpha) \end{aligned}$$

