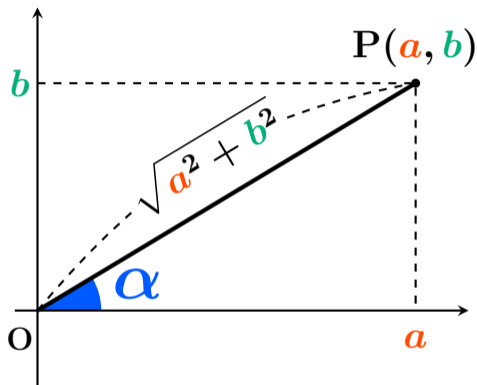


公式 (三角関数の合成)



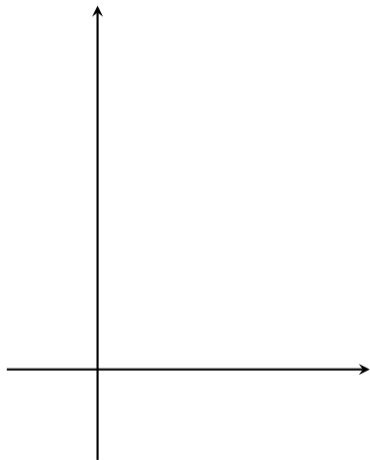
$$a \sin \theta + b \cos \theta$$

$$= \sqrt{a^2 + b^2} \sin(\theta + \alpha)$$

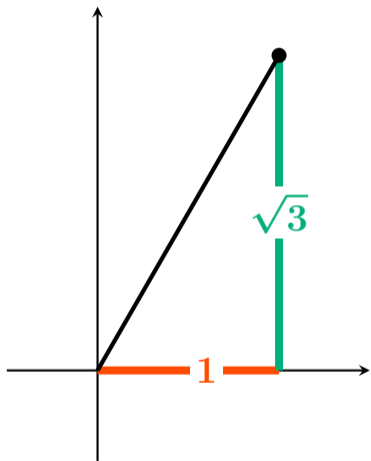
※ 暗記不要

次のページから始まる説明
を理解するだけで OK

$$\sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha) \text{ へ変形?}$$



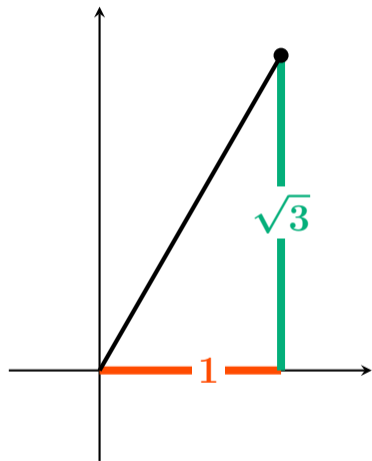
$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形？



三平方の定理より

$$\text{斜め}^2 = \bigcirc^2 + \triangle^2$$

$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形?

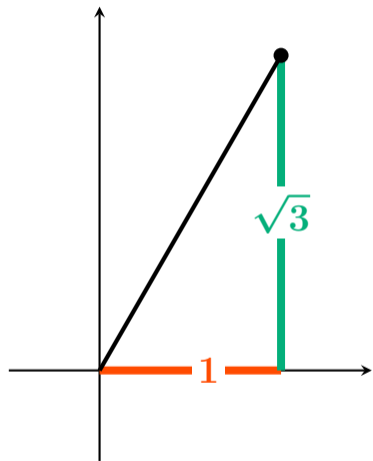


三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + \sqrt{3}^2$$

$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形?



三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + \sqrt{3}^2$$

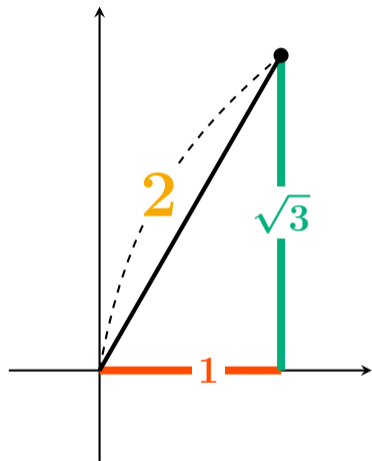
$$\text{斜め}^2 = 1 + 3$$

$$\text{斜め}^2 = 4$$

斜め > 0 より

$$\text{斜め} = 2$$

$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形?



三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + \sqrt{3}^2$$

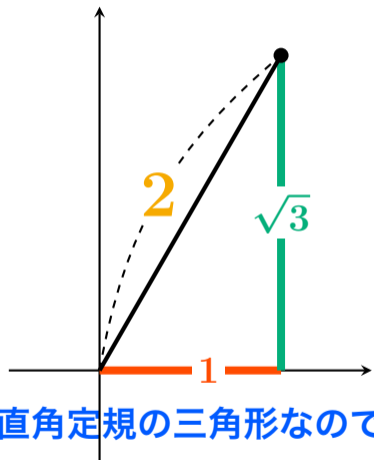
$$\text{斜め}^2 = 1 + 3$$

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斜め > 0 より

$$\text{斜め} = 2$$

$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形?



三平方の定理より

$$\text{斜め}^2 = \bigcirc^2 + \triangle^2$$

$$\text{斜め}^2 = 1^2 + \sqrt{3}^2$$

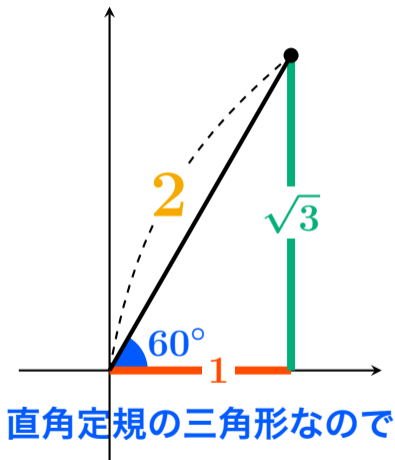
$$\text{斜め}^2 = 1 + 3$$

$$\text{斜め}^2 = 4$$

斜め > 0 より

$$\text{斜め} = 2$$

$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形?



三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + \sqrt{3}^2$$

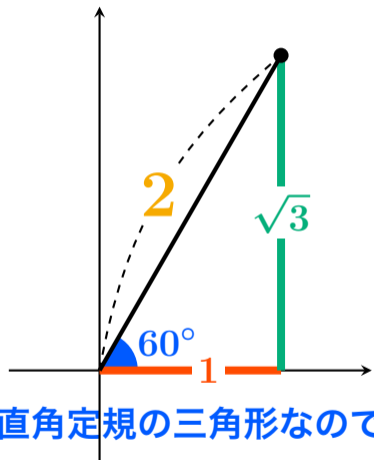
$$\text{斜め}^2 = 1 + 3$$

$$\text{斜め}^2 = 4$$

斜め > 0 より

$$\text{斜め} = 2$$

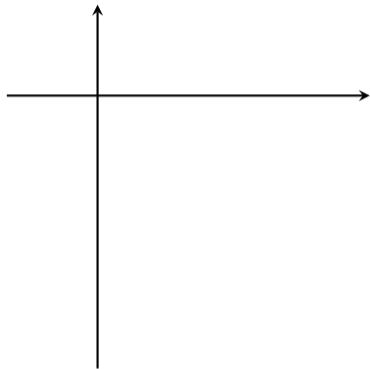
$1 \sin \theta + \sqrt{3} \cos \theta = r \sin(\theta + \alpha)$ へ変形?



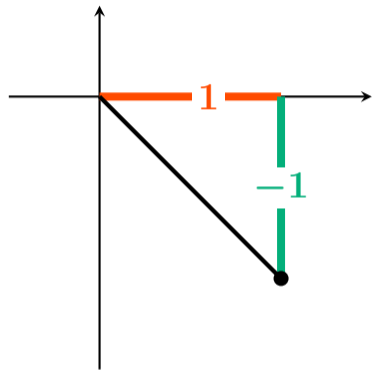
$$\sin \theta + \sqrt{3} \cos \theta$$

$$= 2 \sin(\theta + 60^\circ) \quad \boxed{\text{答}}$$

$$\sin \theta - \cos \theta = r \sin(\theta + \alpha) \text{ へ変形?}$$



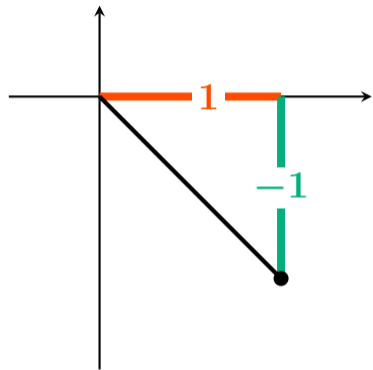
1 sin θ - 1 cos $\theta = r \sin(\theta + \alpha)$ へ変形？



三平方の定理より

$$\text{斜め}^2 = \bigcirc^2 + \triangle^2$$

$1 \sin \theta - 1 \cos \theta = r \sin(\theta + \alpha)$ へ変形？

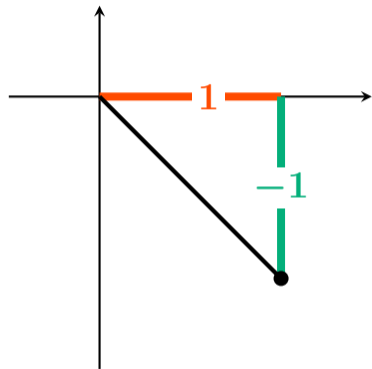


三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + (-1)^2$$

$1 \sin \theta - 1 \cos \theta = r \sin(\theta + \alpha)$ へ変形？



三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + (-1)^2$$

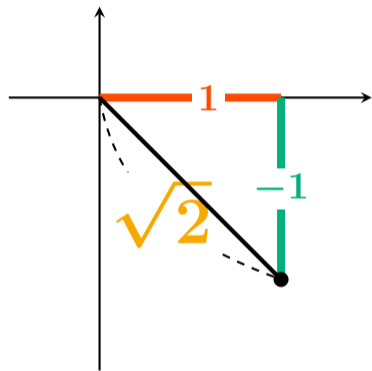
$$\text{斜め}^2 = 1 + 1$$

$$\text{斜め}^2 = 2$$

斜め > 0 より

$$\text{斜め} = \sqrt{2}$$

$1 \sin \theta - 1 \cos \theta = r \sin(\theta + \alpha)$ へ変形？



三平方の定理より

$$\text{斜め}^2 = \text{○}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + (-1)^2$$

$$\text{斜め}^2 = 1 + 1$$

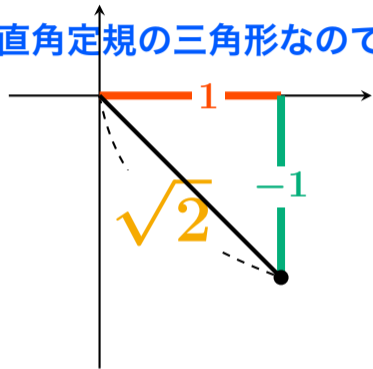
$$\text{斜め}^2 = 2$$

斜め > 0 より

$$\text{斜め} = \sqrt{2}$$

$1 \sin \theta - 1 \cos \theta = r \sin(\theta + \alpha)$ へ変形？

直角定規の三角形なので



三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + (-1)^2$$

$$\text{斜め}^2 = 1 + 1$$

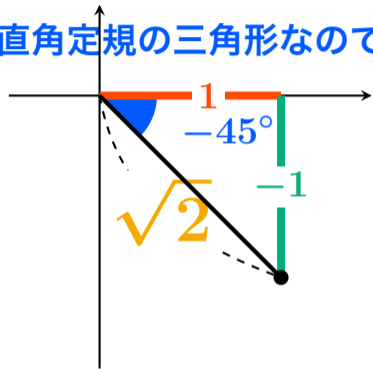
$$\text{斜め}^2 = 2$$

斜め > 0 より

$$\text{斜め} = \sqrt{2}$$

$1 \sin \theta - 1 \cos \theta = r \sin(\theta + \alpha)$ へ変形？

直角定規の三角形なので



三平方の定理より

$$\text{斜め}^2 = \text{〇}^2 + \text{△}^2$$

$$\text{斜め}^2 = 1^2 + (-1)^2$$

$$\text{斜め}^2 = 1 + 1$$

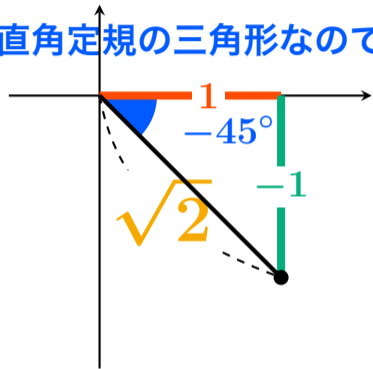
$$\text{斜め}^2 = 2$$

斜め > 0 より

$$\text{斜め} = \sqrt{2}$$

$\sin \theta - \cos \theta = r \sin(\theta + \alpha)$ へ変形？

直角定規の三角形なので



$$\sin \theta - \cos \theta$$

$$= \sqrt{2} \sin(\theta - 45^\circ) \quad \boxed{\text{答}}$$