

6 P136

$$(2) \begin{cases} y = \cos 2\theta \\ y = \sin\theta + 1 \end{cases}$$

よおす、グラフとが

$y = \cos 2\theta$  の周期  $\pi$

また交点の  $\theta$  は

$$\cos 2\theta = \sin\theta + 1$$

$$\cos^2\theta - \sin^2\theta = \sin\theta + 1$$

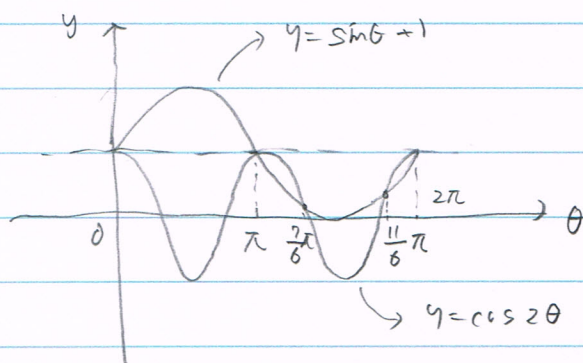
$$1 - 2\sin^2\theta = \sin\theta + 1$$

$$2\sin^2\theta + \sin\theta = 0$$

$$2\sin\theta \left( \sin\theta + \frac{1}{2} \right) = 0$$

$$\sin\theta = 0, -\frac{1}{2} \quad (0 \leq \theta < 2\pi)$$

$$\theta = 0, \pi, \frac{7}{6}\pi, \frac{11}{6}\pi$$



$$\cos 2\theta < \sin\theta + 1 \text{ となる } \theta \text{ は}$$

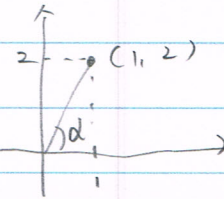
$$\therefore 0 < \theta < \pi, \frac{7}{6}\pi < \theta < \frac{11}{6}\pi$$

7 P136

$$y = \sin x + 2 \cos x$$

$$= \sqrt{1^2 + 2^2} \sin(\theta + \alpha)$$

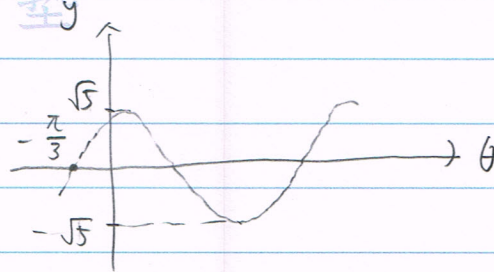
$$= \sqrt{5} \sin(\theta + \alpha)$$



$$\alpha = \frac{\pi}{3}$$

よす

$$y = \sqrt{5} \sin\left(\theta + \frac{\pi}{3}\right)$$



最大値  $\sqrt{5}$ , 最小値  $-\sqrt{5}$

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