(33) $y = 2\sin x + 3\cos x \quad x = \pi/3$

$y(\pi/3) = 2\sin\frac{\pi}{3} + 3\cos\pi/3$

$$= 2 \cdot \frac{\sqrt{3}}{2} + 3 \cdot \frac{1}{2} = \sqrt{3} + \frac{3}{2}$$

$\frac{dy}{dx} = 2\cos x - 3\sin x$

$$= 2\cos\pi/3 - 3\sin\pi/3$$

$$= 2 \cdot \frac{1}{2} - 3 \cdot \sqrt{3}/2 = 1 - \frac{3\sqrt{3}}{2}$$

$$y - \left(\sqrt{3} + \frac{3}{2}\right) = \left(1 - \frac{3\sqrt{3}}{2}\right)\left(x - \pi/3\right)$$

② $y = \cos x \qquad x = \pi/3$

$y(\pi/3) = \cos \pi/3 = \dfrac{1}{2}$

$y' = -\sin x$

$y'(\pi/3) = -\sin \pi/3 = -\sqrt{3}/2$

$y - \dfrac{1}{2} = -\dfrac{\sqrt{3}}{2}\left(x - \pi/3\right)$