

Пл. зан. 2

$$1. a) \sin\left(\frac{\pi}{15}\right) \cdot \cos\left(\frac{4\pi}{15}\right) + \cos\left(\frac{\pi}{15}\right) \cdot \sin\left(\frac{4\pi}{15}\right) =$$
$$= \sin\left(\frac{\pi}{15} + \frac{4\pi}{15}\right) = \sin\frac{5\pi}{15} = \sin\frac{\pi}{3} = \frac{\sqrt{3}}{2}$$

$$b) \cos 123^\circ \cdot \cos 78^\circ + \sin 123^\circ \cdot \sin 78^\circ =$$
$$= \cos(123^\circ - 78^\circ) = \cos 45^\circ = \frac{\sqrt{2}}{2}$$

$$2. a) -\cos(\alpha + \beta) - \sin \beta \cdot \sin \alpha =$$
$$= \sin \alpha \cdot \sin \beta - \cos \alpha \cdot \cos \beta -$$
$$- \sin \beta \cdot \sin \alpha = -\cos \alpha \cdot \cos \beta$$

$$b) \cos\left(x - \frac{2\pi}{3}\right) - \frac{\sqrt{3}}{2} \sin x =$$

$$= \cos x \cdot \cos \frac{2\pi}{3} + \sin x \cdot \sin \frac{2\pi}{3} -$$

$$- \frac{\sqrt{3}}{2} \sin x = -\frac{1}{2} \cdot \cos x + \frac{\sqrt{3}}{2} \sin x -$$

$$- \frac{\sqrt{3}}{2} \sin x = -\frac{1}{2} \cdot \cos x$$