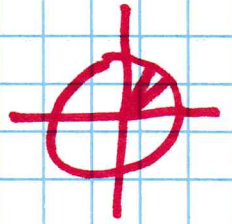


$$\sin\left(\frac{\pi}{4} + \frac{\pi}{3}\right)$$

$$\frac{1}{4} + \frac{1}{3} = \frac{3}{12} + \frac{4}{12} = \frac{7}{12}$$

$$= \sin\left(\frac{7\pi}{12}\right) = \sin\frac{\pi}{4} \cos\frac{\pi}{3} + \cos\frac{\pi}{4} \sin\frac{\pi}{3}$$

$$= \frac{\sqrt{2}}{2} \cdot \frac{1}{2} + \frac{\sqrt{2}}{2} \cdot \frac{\sqrt{3}}{2} = \frac{1}{4}(\sqrt{2} + \sqrt{6})$$



$$7.2.10 \quad \cos\left(\frac{17\pi}{12}\right)$$

$$\frac{17}{12} = \frac{8}{12} + \frac{9}{12} = \frac{2}{3} + \frac{3}{4}$$

$$\cos\left(\frac{17\pi}{12}\right) = \cos\left(\frac{2\pi}{3} + \frac{3\pi}{4}\right)$$

$$\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$$

$$= \cos\frac{2\pi}{3} \cos\frac{3\pi}{4} - \sin\frac{2\pi}{3} \sin\frac{3\pi}{4}$$

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

$$= \frac{1}{4}(\sqrt{2} - \sqrt{6})$$

