

$$2. \cos 105^\circ = \frac{\sqrt{2} - \sqrt{6}}{4}$$

$$3. \sin \frac{11\pi}{12} = \frac{\sqrt{6} - \sqrt{2}}{4}$$

$$4. \tan \pi/12 = 2 - \sqrt{3} = \frac{3 - \sqrt{3}}{3 + \sqrt{3}}$$

$$5. \cos(-75^\circ) = \frac{\sqrt{6} - \sqrt{2}}{4}$$

$$6. \sin(\pi/2 + x) = \cos x$$

$$\sin \pi/2 \cos x + \cos \pi/2 \sin x = \cos x + 0 = \cos x \quad \checkmark$$

$$7. \tan(\pi + x) = \tan x$$

$$\tan(\pi + x) = \frac{\tan \pi + \tan x}{1 - \tan \pi \tan x} = \frac{0 + \tan x}{1 - 0} = \tan x \quad \checkmark$$

$$8. \cos(\frac{3\pi}{2} - x) = -\sin x$$

$$\cos \frac{3\pi}{2} \cos x + \sin \frac{3\pi}{2} \sin x = 0 - \sin x = -\sin x \quad \checkmark$$

$$18. \cos(\frac{3\pi}{2} + x) = \sin x$$

$$\cos \frac{3\pi}{2} \cos x - \sin \frac{3\pi}{2} \sin x = 0 + \sin x = \sin x \quad \checkmark$$

$$19. \sin(\frac{3\pi}{2} + x) = -\cos x$$

$$\sin \frac{3\pi}{2} \cos x + \cos \frac{3\pi}{2} \sin x = -\cos x + 0 = -\cos x \quad \checkmark$$

$$20. \tan(x - 2\pi) = \tan x$$

$$\tan(x - 2\pi) = \frac{\tan x - \tan 2\pi}{1 + \tan x \tan 2\pi} = \frac{\tan x - 0}{1 - 0} = \tan x \quad \checkmark$$