

# sicolo

## # answers #

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$$(1) \quad \tan \theta = -1 \\ \left(-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}\right) \\ \theta = -\frac{\pi}{4}$$

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

$$(3) \quad \sin\left(-\frac{\pi}{6}\right) \\ = -\frac{1}{2}$$

$$(4) \quad \cos \frac{5\pi}{6} \\ = -\frac{\sqrt{3}}{2}$$

$$(5) \quad \cos \frac{4\pi}{3} \\ = -\frac{1}{2}$$

$$(6) \quad \cos \theta = 0 \\ (-\pi \leq \theta \leq 0) \\ \theta = -\frac{\pi}{2}$$

$$(7) \quad \cos \theta = \frac{\sqrt{2}}{2} \\ (0 \leq \theta \leq \pi) \\ \theta = \frac{\pi}{4}$$

$$(8) \quad \cos \frac{3\pi}{2} \\ = 0$$

$$(9) \quad \sin \frac{\pi}{2} \\ = 1$$

$$(10) \quad \log_{125\sqrt{5}} 625 \\ = \frac{8}{7}$$

$$(11) \quad \cos(-\pi) \\ = -1$$

$$(12) \quad \cos \theta = \frac{\sqrt{3}}{2} \\ (0 \leq \theta \leq \pi) \\ \theta = \frac{\pi}{6}$$

$$(13) \quad \cos \theta = 0 \\ (0 \leq \theta \leq \pi) \\ \theta = \frac{\pi}{2}$$

$$(14) \quad \sin \theta = -\frac{1}{2} \\ \left(\frac{3\pi}{2} \leq \theta \leq \frac{5\pi}{2}\right) \\ \theta = \frac{11\pi}{6}$$

$$(15) \quad \cos \frac{7\pi}{4} \\ = \frac{\sqrt{2}}{2}$$

$$(16) \quad \sin \frac{7\pi}{4} \\ = -\frac{\sqrt{2}}{2}$$

$$(17) \quad \log_{\frac{1}{\sqrt{3}}} 27 \\ = -6$$

$$(18) \quad \log_5 \frac{\sqrt{5}}{25} \\ = -\frac{3}{2}$$

$$(19) \quad \sin \theta = \frac{1}{2} \\ \left(-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}\right) \\ \theta = \frac{\pi}{6}$$

$$(20) \quad \cos \theta = 1 \\ (-\pi \leq \theta \leq 0) \\ \theta = 0$$

$$(21) \quad \log_{9\sqrt{3}} \frac{1}{3} \\ = -\frac{2}{5}$$

$$(22) \quad \log_{\frac{1}{16}} \frac{4}{\sqrt{2}} \\ = -\frac{3}{8}$$

$$(23) \quad \cos \theta = -\frac{\sqrt{3}}{2} \\ (-\pi \leq \theta \leq 0) \\ \theta = -\frac{5\pi}{6}$$

$$(24) \quad \sin \theta = \frac{1}{2} \\ \left(\frac{3\pi}{2} \leq \theta \leq \frac{5\pi}{2}\right) \\ \theta = \frac{13\pi}{6}$$

$$(25) \quad \sin \frac{\pi}{2} \\ = 1$$

$$(26) \quad \sin \frac{3\pi}{4} \\ = \frac{\sqrt{2}}{2}$$

$$(27) \quad \cos \theta = \frac{\sqrt{2}}{2} \\ (\pi \leq \theta \leq 2\pi) \\ \theta = \frac{7\pi}{4}$$

$$(28) \quad \cos \frac{5\pi}{6} \\ = -\frac{\sqrt{3}}{2}$$

$$(29) \quad \tan \theta = \frac{\sqrt{3}}{3} \\ \left(\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{2}\right) \\ \theta = \frac{7\pi}{6}$$

$$(30) \quad \sin \theta = \frac{\sqrt{2}}{2} \\ \left(\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{2}\right) \\ \theta = \frac{3\pi}{4}$$

$$(31) \quad \log_{\frac{\sqrt{5}}{25}} 625 \\ = -\frac{8}{3}$$

$$(32) \quad \cos \theta = -\frac{1}{2} \\ (\pi \leq \theta \leq 2\pi) \\ \theta = \frac{4\pi}{3}$$

$$(33) \quad \tan \theta = \sqrt{3} \\ \left(-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}\right) \\ \theta = \frac{\pi}{3}$$

$$(34) \quad \tan \theta = \frac{\sqrt{3}}{3} \\ \left(-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}\right) \\ \theta = \frac{\pi}{6}$$

$$(35) \quad \tan \theta = -\sqrt{3} \\ \left(-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}\right) \\ \theta = -\frac{\pi}{3}$$

$$(36) \quad \tan\left(-\frac{3\pi}{4}\right) \\ = 1$$

$$(37) \quad \tan \theta = \sqrt{3} \\ \left(\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{2}\right) \\ \theta = \frac{4\pi}{3}$$

$$(38) \quad \log_2 16 \\ = 4$$

$$(39) \quad \cos\left(-\frac{\pi}{3}\right) \\ = \frac{1}{2}$$

$$(40) \quad \tan \theta = -1 \\ \left(\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{2}\right) \\ \theta = \frac{3\pi}{4}$$

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My favorite English saying is that  
Virtue is its own reward.