

**[11-11-21-T11]**

*Problem set*

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[1] Find the value of the sine, cosine, and tangent functions at each of the following arguments. You must work each one explicitly using the appropriate identities. Even so, it is helpful to think of the unit circle.

$$x = \frac{5\pi}{6}, \frac{3\pi}{4}, \frac{2\pi}{3}, \frac{7\pi}{6}, \frac{5\pi}{4}, \frac{4\pi}{3}$$

Answers:

$$\sin x = \left\{ \frac{1}{2}, \frac{1}{\sqrt{2}}, \frac{\sqrt{3}}{2}, -\frac{1}{2}, -\frac{1}{\sqrt{2}}, -\frac{\sqrt{3}}{2} \right\}$$

$$\cos x = \left\{ -\frac{\sqrt{3}}{2}, -\frac{1}{\sqrt{2}}, -\frac{1}{2}, -\frac{\sqrt{3}}{2}, -\frac{1}{\sqrt{2}}, -\frac{1}{2} \right\}$$

$$\tan x = \left\{ -\frac{1}{\sqrt{3}}, -1, -\sqrt{3}, \frac{1}{\sqrt{3}}, 1, \sqrt{3} \right\}$$