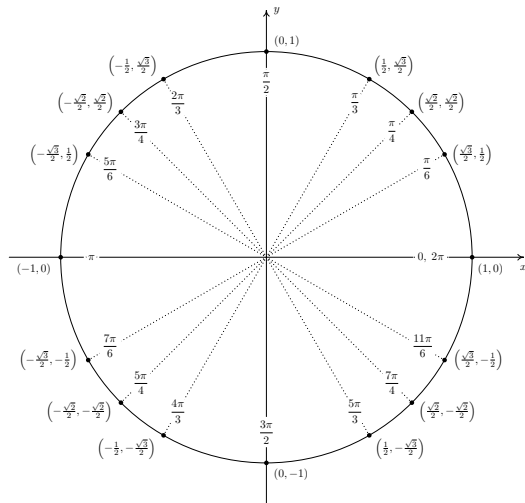Figure 4.1.15: Important Points on the Unit Circle

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True or False: $\sin\left(\frac{\pi}{3}\right) = \frac{1}{2}$

(a) True, and I can explain why

(b) True, but I am unsure why

(c) False, and I can explain why

(d) False, but I am unsure why

(e) Umm . . .

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

(a) $\frac{1}{2}$

(b) $-\frac{\sqrt{3}}{2}$

(c) $-\frac{1}{2}$

(d) $\frac{2}{\sqrt{2}}$

(e) Umm ...

1. Determine the *exact* values (i.e. no decimal approximations)

    (a) $\cos\left(\frac{2\pi}{3}\right)$

    (b) $\sin\left(\frac{3\pi}{2}\right)$

    (c) $\tan\left(-\frac{\pi}{4}\right)$

    (d) $\cos\left(\frac{7\pi}{6}\right)$

2. Graph $y = \sin(x)$ and $y = \cos(x)$ on the interval $[0, 2\pi]$

    (a) Where is $\sin(x)$ positive? Negative? Increasing? Decreasing?

    (b) Where is $\cos(x)$ positive? Negative? Increasing? Decreasing?

3. (a) Find a value of a where $\cos(x) = \sin(x + a)$

    (b) Find a value of a where $-\sin(x) = \cos(x + a)$