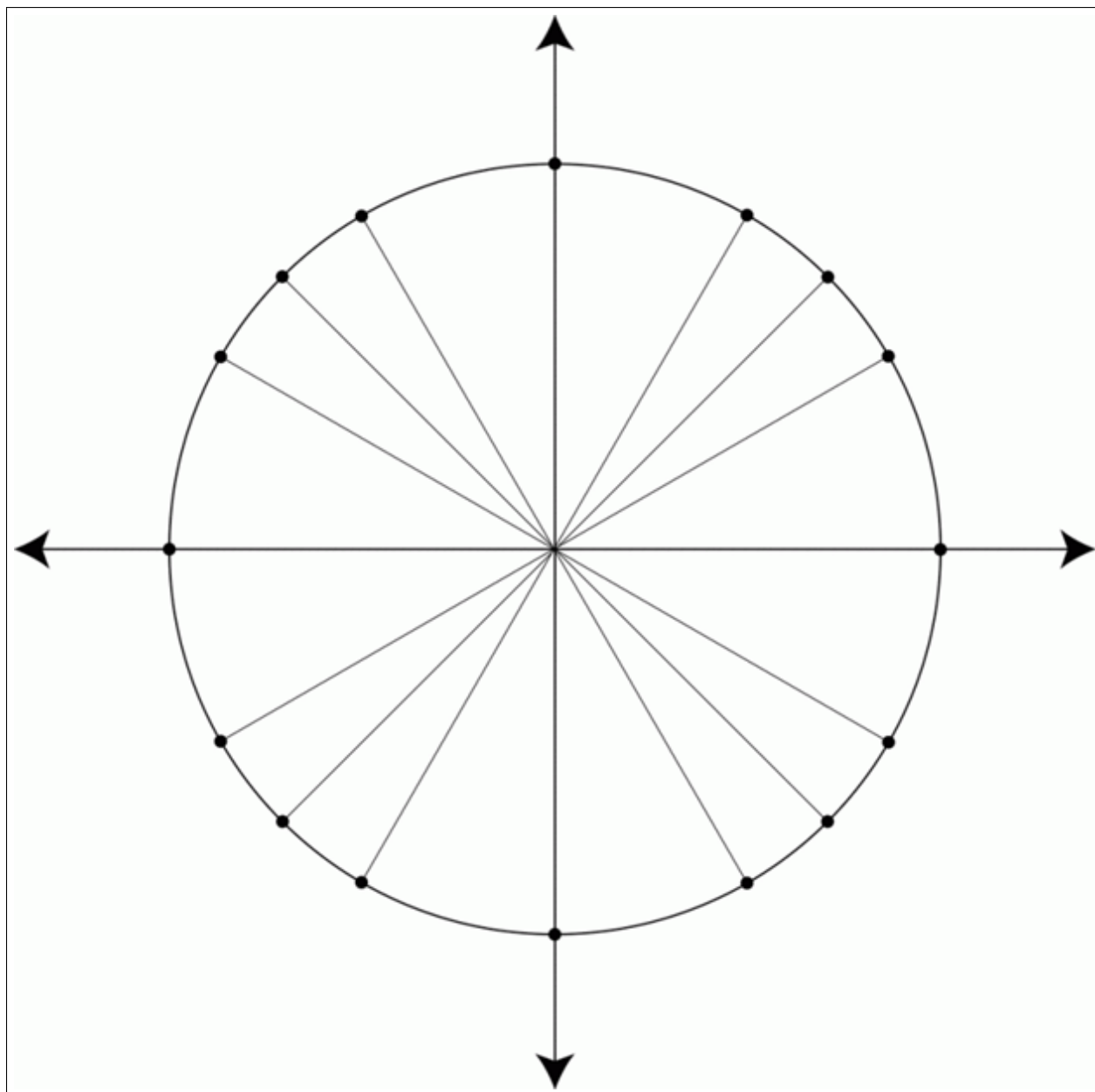**Problem 1.** The *unit circle* is the circle centered at the origin of radius one. Its equation is

$$x^2 + y^2 = 1.$$

Below is a diagram of the unit circle. The indicated angles are all multiples of 30° or 45°.

Label each point indicated on the circle with the number of degrees of the angle corresponding to that point. Also indicate the radian measure of the angle.

Recall the following:

- $\sin 30° = \dfrac{1}{2}$ $\qquad\qquad$ $\sin 45° = \dfrac{\sqrt{2}}{2}$ $\qquad\qquad$ $\sin 60° = \dfrac{\sqrt{3}}{2}$

- $\cos 30° = \dfrac{\sqrt{3}}{2}$ $\qquad\qquad$ $\cos 45° = \dfrac{\sqrt{2}}{2}$ $\qquad\qquad$ $\cos 60° = \dfrac{1}{2}$

Problem 2. The *unit circle* has equation $x^2 + y^2 = 1$.

Below is a diagram of the unit circle.

Label each point with the coordinates the point.