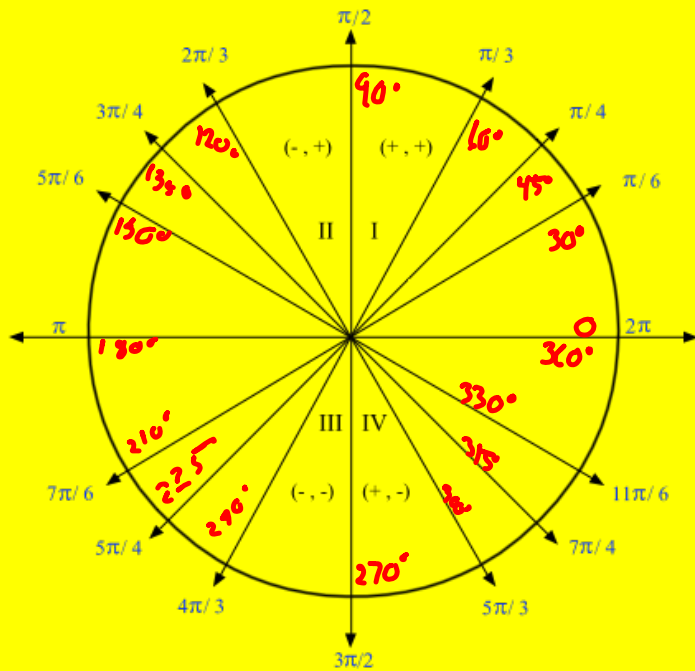


The Unit Circle

- * Identify a unit circle and describe its relationships to real numbers.
- * Evaluate trigonometric functions using the unit circle.
- * Use the domain and period to evaluate sine and cosine functions.

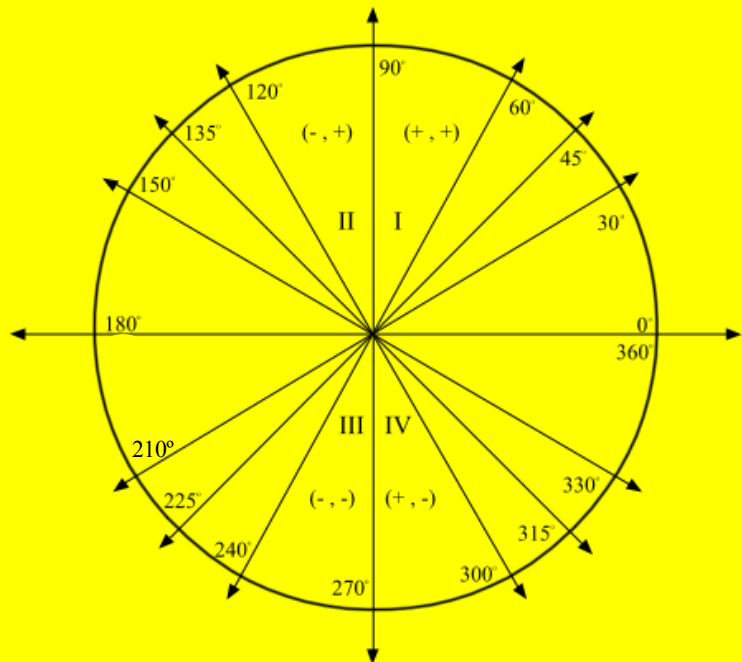


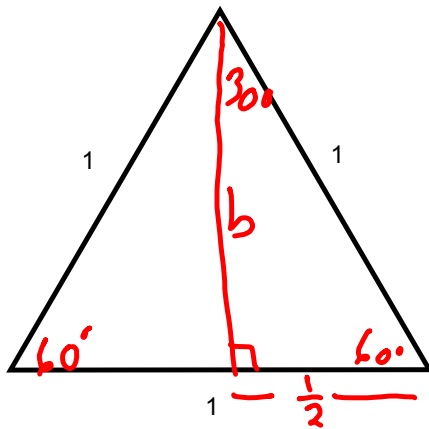
Unit circle in radians

$$r = 1$$

$$C = 2\pi r$$

Unit circle in degrees



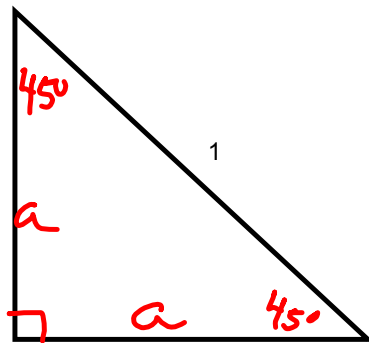


$$1^2 = \left(\frac{1}{2}\right)^2 + b^2$$

$$1 = \frac{1}{4} + b^2$$

$$\frac{3}{4} = b^2$$

$$\frac{\sqrt{3}}{2} = b$$



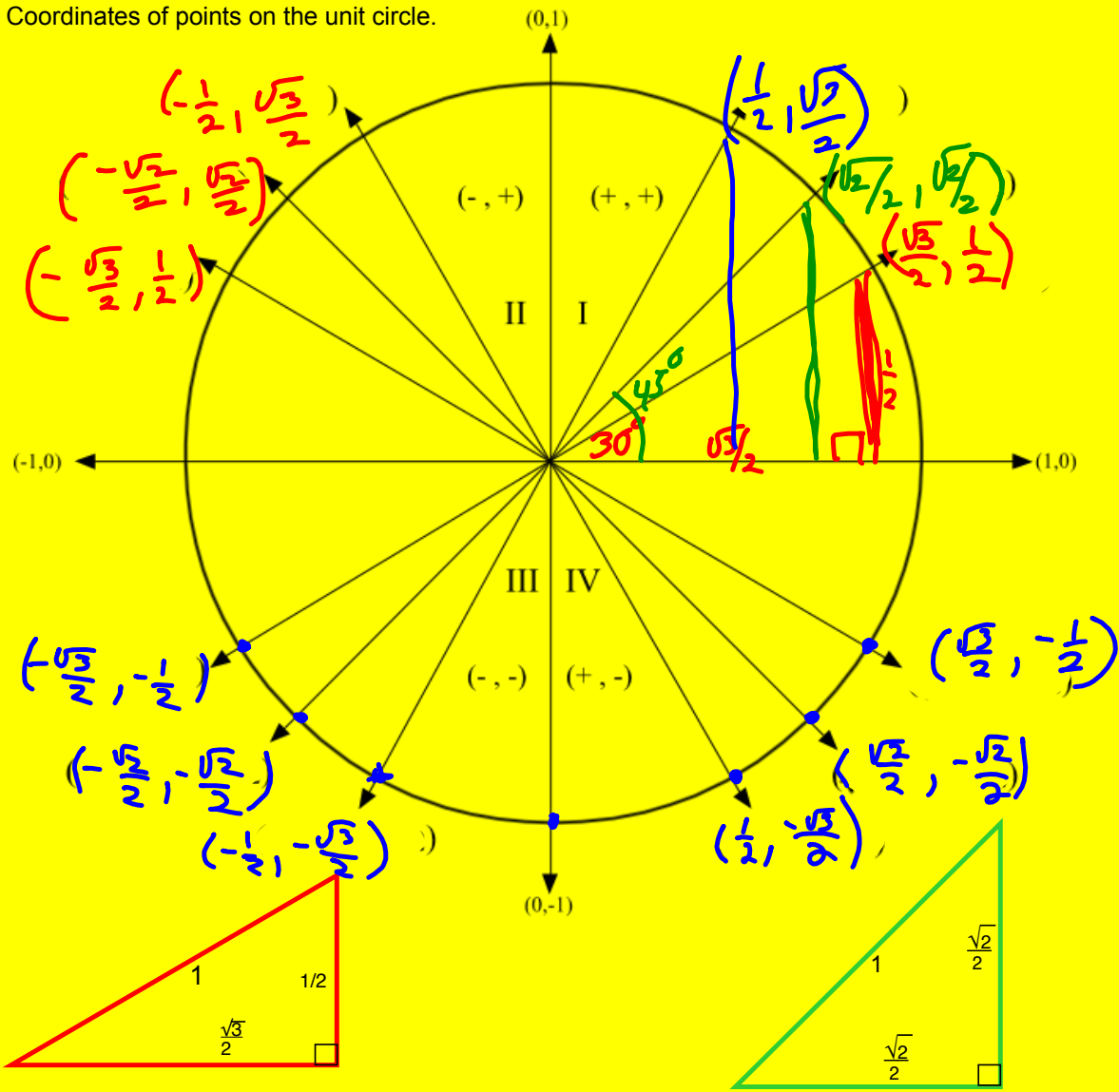
$$a^2 + a^2 = 1$$

$$2a^2 = 1$$

$$a^2 = \frac{1}{2}$$

$$a = \frac{1}{\sqrt{2}} \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

Coordinates of points on the unit circle.



Put it all together:

Write in the radian measures of the angles.

