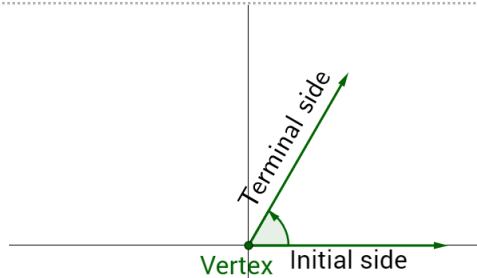


Precalculus

4-01 Angle Measures

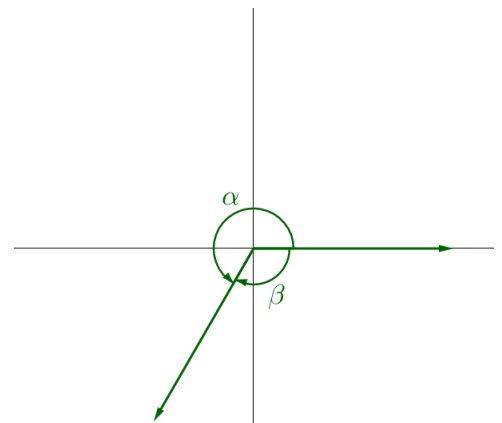
Angles in standard position

- Vertex at _____
- Initial side on positive _____
- Terminal side rotates _____



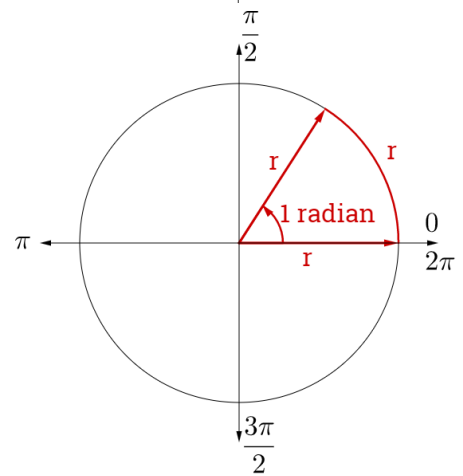
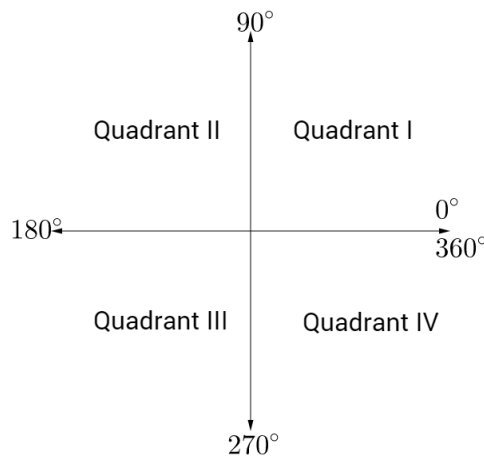
Coterminal Angles

- 2 angles with same sides, but different _____
- To find coterminal angles
 - _____



Angle Measures

- Degree Measures
- Radian Measures
 - Angle where radius = _____
- Acute → _____
- Obtuse → _____
- Complementary → $\alpha + \beta =$ _____
- Supplementary → $\alpha + \beta =$ _____



Find a coterminal angle with $\theta = -\frac{\pi}{8}$

Find the supplement of $\theta = \frac{\pi}{4}$

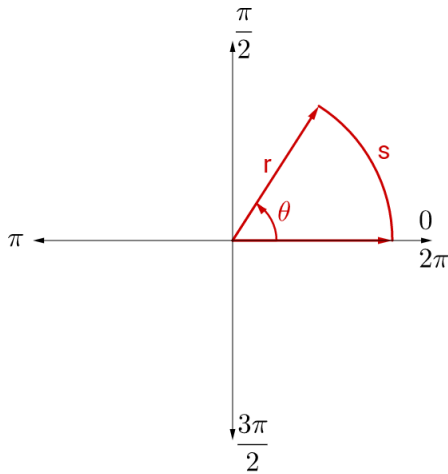
Convert radians to degrees: $180^\circ = \pi$

Convert 120° to radians

Applications

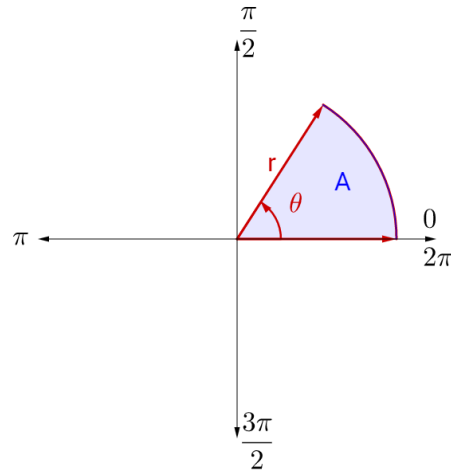
• Arc Length

- _____
- Where θ is in _____



• Area of Sector

- $A = \text{fraction of circle} \times \pi r^2$
- $A = \frac{\theta}{2\pi} \times \pi r^2$
- _____
- Where θ is in _____



• Speeds

- Angular speed: _____
- Linear speed (tangential): _____
- _____

A 6-inch diameter gear makes 2.5 revolutions per second. Find the angular speed in radians per second.

How fast is a tooth at the edge of the gear moving in in./s?