

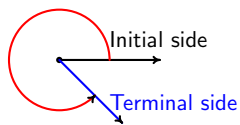
Basic Terminology

Two distinct points A and B determine a line.

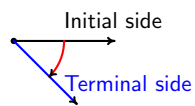
- Line AB
- Segment AB
- Ray AB



An angle is formed by rotating a ray around its endpoint.



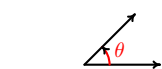
Positive Angle



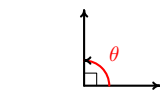
Negative Angle

Notes

Basic Terminology (Cont)



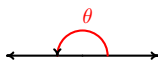
Acute Angle
 $0^\circ < \theta < 90^\circ$



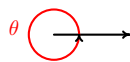
Right Angle
 $\theta = 90^\circ$



Obtuse Angle
 $90^\circ < \theta < 180^\circ$



Straight Angle
 $\theta = 180^\circ$



Complete Rotation
 $\theta = 360^\circ$

Notes

Complementary and Supplementary

Two angles are:

- complementary : their sum is 90°
- supplementary : their sum is 180°

Example

Angle θ has measure 39° . What are its complementary and supplementary angles?

comp $90^\circ - 39^\circ = 51^\circ$

supp $180^\circ - 39^\circ = 141^\circ$

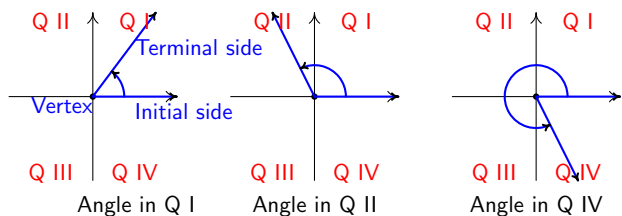
Notes

Standard Position

An angle is drawn in **standard position** if

- its vertex is at the origin
- its initial side lies on the positive x-axis

An angle in standard position is said to lie in the quadrant in which its terminal side lies.

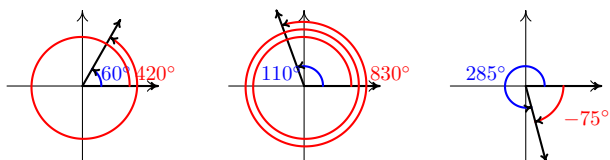


Notes

Co-Terminal Angles

Two angles are **coterminal angles** if they have the same initial and terminal side.

Such angles differ by a multiple of 360° .



Notes

Finding Co-Terminal Angles

Example

Find the angle of smallest positive measure coterminal with each angle.

- Add or subtract 360° as many times as needed to obtain an angle with measure between 0° and 360° .

- 908°
 - $908 - 360 = 548$
 - $548 - 360 = 188$
 - Answer: 188°
- -71°
 - $-71 + 360 = 289$
 - Answer: 289°

Notes