Trigonometry

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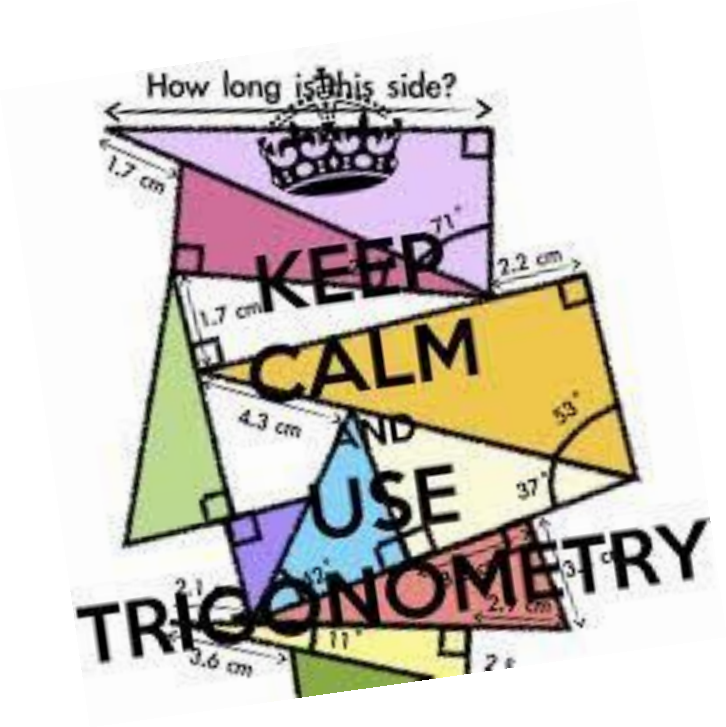


Trigonometry

Means “measurement of triangles”

Measurements of Angles

- Angles can be measured in two measurements:
  - **Degrees**
  - **Radians**

- Relationship between Degrees and Radians

$$360^o = 2\pi\, rad$$

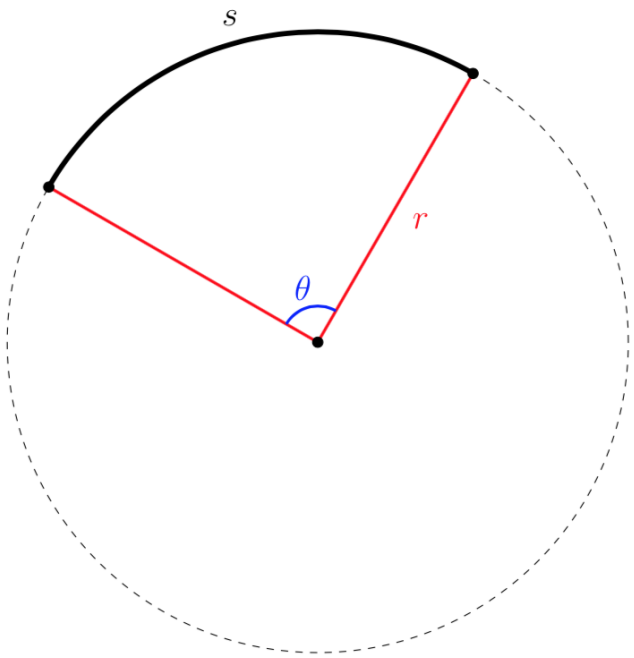
Conversions between Degrees and Radians

- Convert to Radians
  - 135^o
  - 540^o

- Convert to Degrees
  - $\frac{\pi}{2}$
  - $\frac{3\pi}{5}$

Arc Length

$$S = r\theta$$



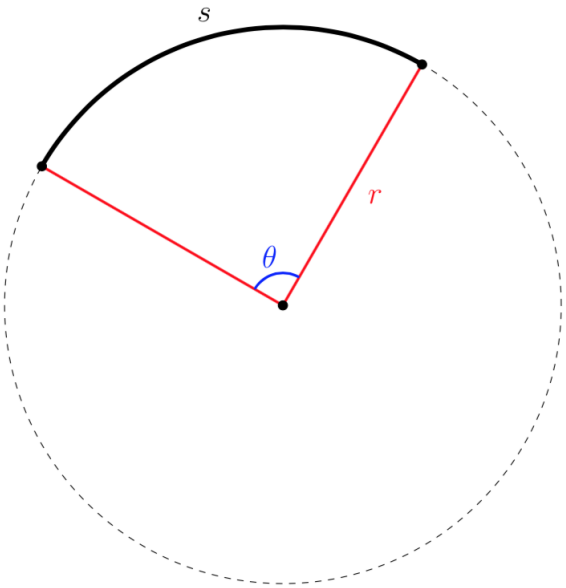
Finding Arc Length

- A circle has a radius of 4 inches. Find the length of the arc intercepted by a central angle of 240^o.

- A circle has a radius of 27 inches. Find the length of the arc intercepted by a central angle of 160^o.

Area of a Sector of a Circle

$$A = \frac{1}{2} r^2 \theta$$



Area of a Sector of a Circle

- A sprinkler on a golf course fairway sprays water over a distance of 70 feet and rotates through an angle of 120^o. Find the area of the fairway watered by the sprinkler.

Thanks!

Any questions?