

## Class Discussion

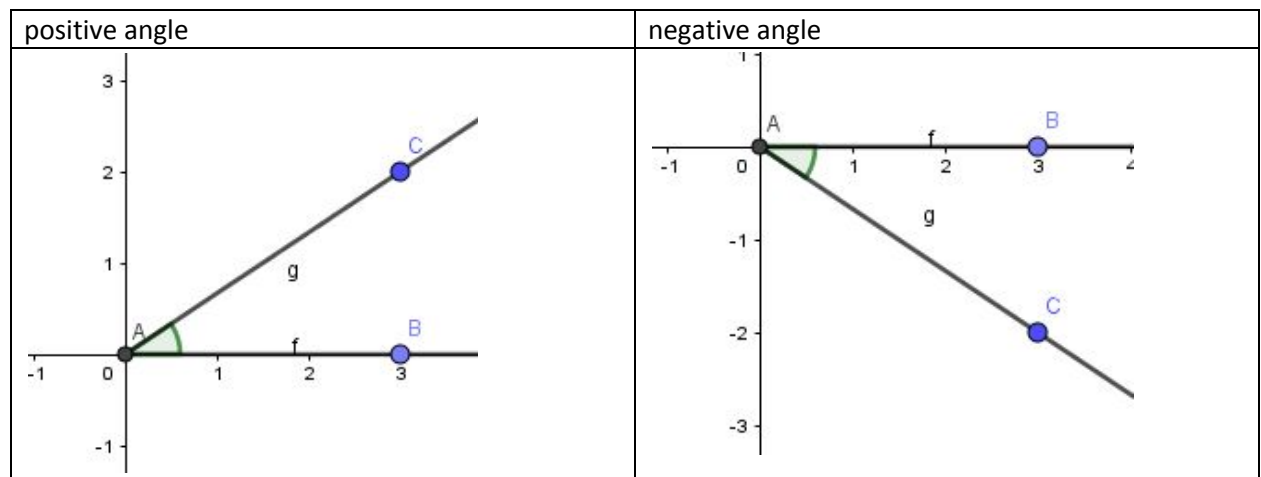
### Unit 4 Topic 1 Part 1 Radian

Objective: understand radian, signed angle, co-terminal, and angular velocity

1. radian: use the ratio of arc length and the radius to represent the measure of the center

$$\theta = \frac{s}{r}$$

2. standard position of an angle



Co-terminals:

$\theta_c$  is a co-terminal of  $\theta$  if  $\theta_c = \theta \pm 2k\pi$

Angular Velocity (  $w$  ) and Linear velocity (  $v$  ) of an object that rotates about a fixed point

$$v = \frac{d}{t} \text{ and } w = \frac{\theta}{t} \text{ when } d = r\theta \rightarrow v = rw$$

Ex1: Find the angular velocity of the earth

Ex2: from a stationary observer in space, find the linear velocity of a person at San Jose