8/29/2012 Sec 1.1 Math 1060

P. 47 4

shipped

$S(x) = 0.90x$, x is # manufactured

input

$P(x) = 0.80x$, x is # shipped

output

purchased

$P(\#\text{ manufactured})$

purchased

$P(S(x)) = 0.80(0.90x)$

$P(x) = 0.72x$

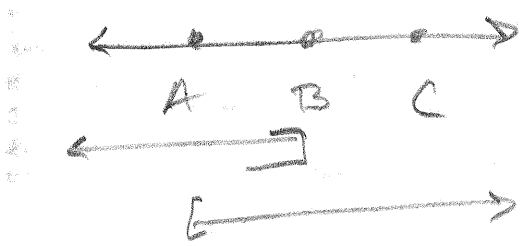
$P(x)$: #manufactured

purchased

Sec 1.1

Ray: a point on a line together with all points of the line on one side of that point

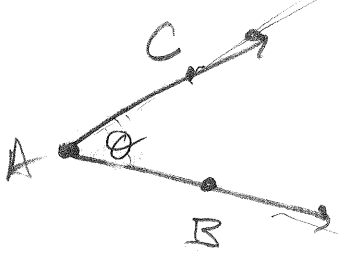
Label $\overrightarrow{AB}$



$\overrightarrow{AC}$

$\overrightarrow{BA}$, $\overrightarrow{AB}$

Angle: the union of two rays with a common end point, called the vertex



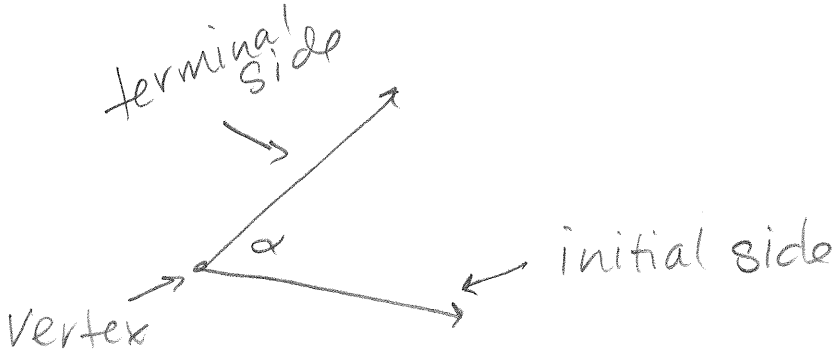
$\angle A$, $\angle CAB$, $\angle \theta$

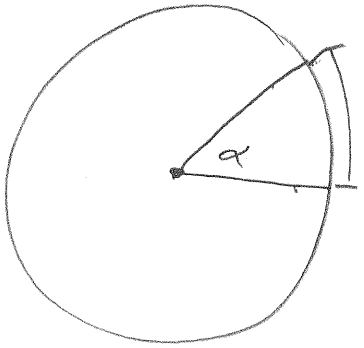
or

$\angle BAC$

Greek letters

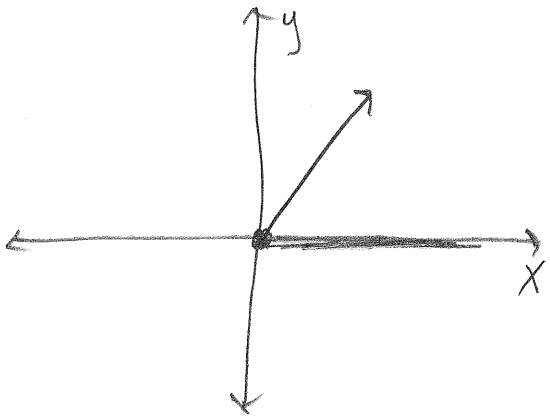
α = alpha, β = Beta, γ = Gamma, θ = theta





Becomes a central angle

← intercepted arc



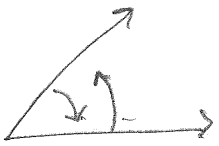
Standard position

1. Vertex at origin
2. initial side on positive x-axis

Measuring an angle

Unit of measure: a degree

One degree: with the circle divided into 360 equal arcs, each arc is 1 degree and the central angle formed by the arc is said to measure 1°



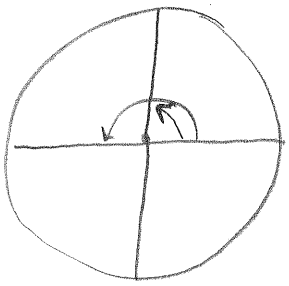
Measure counter clockwise ↑

Positive angle measures

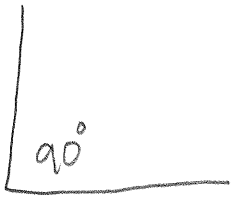
measure clockwise ↓

Negative angle measures

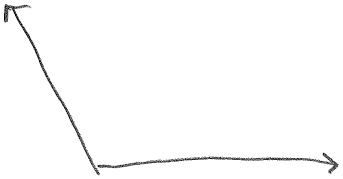
acute: Measure is between 0° and 90°



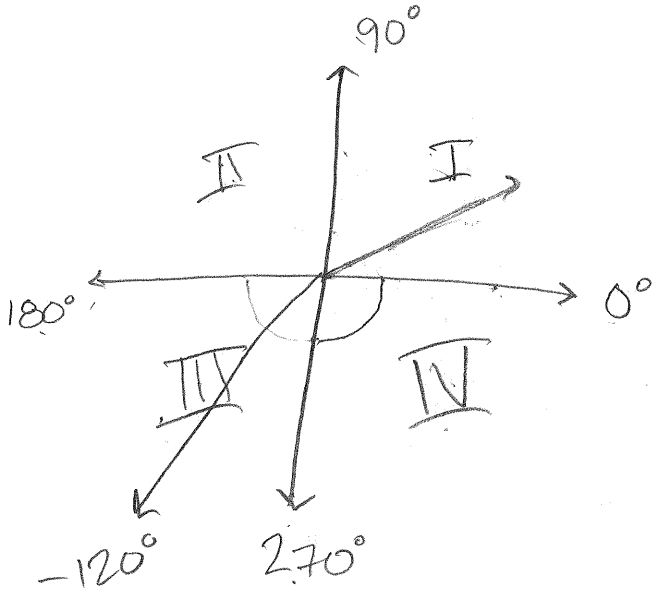
Straight angle: an angle which measures 180°



Right angle: Measure is equal to 90°



obtuse angle: Measure is between 90° and 180°



30° - I Quad

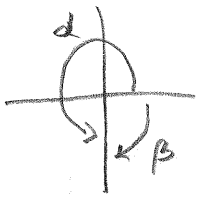
150° - II Quad

-120°

If the terminal side is on an axis, the angle is a

<u>quadrantal</u> angle

270°, -90°



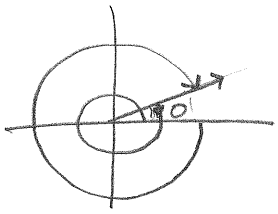
two angles that share same terminal side when in standard position, are said to be Coterminal

$m(\beta) = m(\alpha) + k\,360^\circ$

$270^\circ = -90 + 1 \cdot 360$

or $-90^\circ = 270^\circ + -1 \cdot 360^\circ$

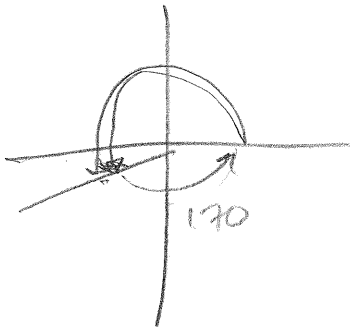
$\alpha = 10^\circ$, 2 coterminal angles. 1 Pos, 1 Neg



$360+10 = 370^\circ$

$10 + -360 = -350^\circ$

Are 190° and -170° coterminal?



$190 + 170 = 360$

$190 - 360 = -170$ ✓

150° and 880°

$$\begin{array}{r} 2 \\ 360\overline{)880} \\ -720 \\ \hline 160 \end{array}$$

Not coterminal

$880 = 160 + 2 \cdot 360$

Quad ? is 998°

IV

$$\begin{array}{r} 998 \\ -360 \\ \hline 638 \\ -360 \\ \hline 278 \end{array}$$

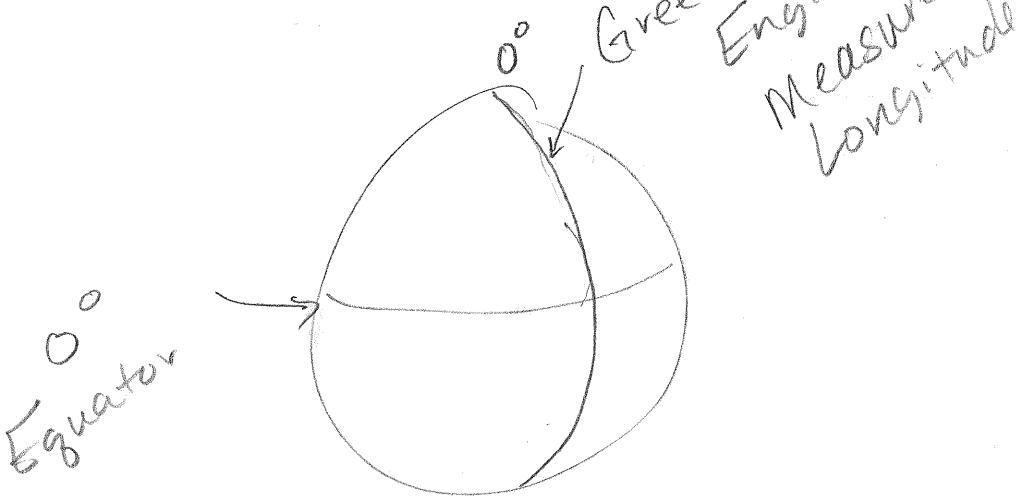
1 degree = 60 min

$1^\circ = 60'$

1 min = 60 sec

$1' = 60''$

$44^\circ 12' 30''$



Ephraim

39.3597° N 111.5856° W

Richfield

38.7725° N, 112.0833° W

$44^\circ 12' 30''$

$30'' = \frac{30'}{60} = \frac{30^\circ}{60 \cdot 60}$

$44^\circ + \frac{12}{60}^\circ + \frac{30^\circ}{60 \cdot 60} = 44.208\overline{3}^\circ$

44.2083°