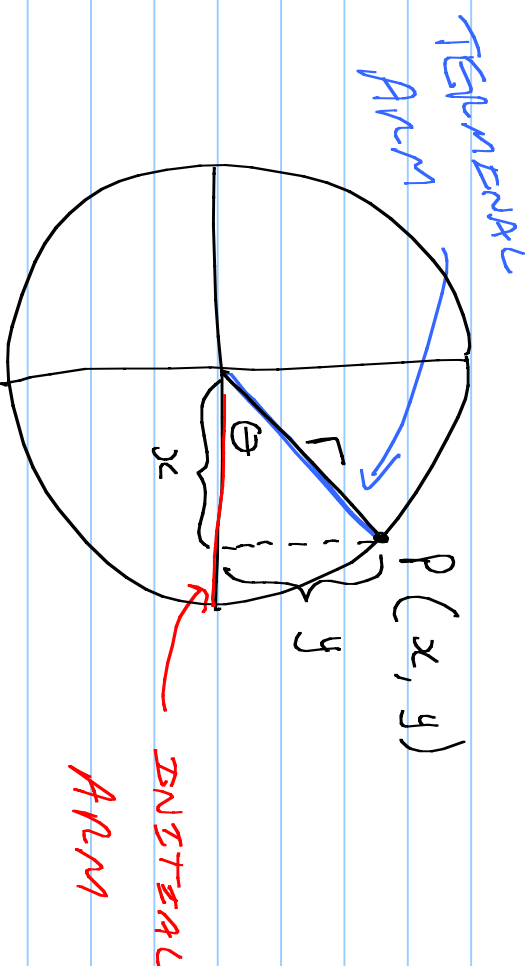


# ANGLES IN STANDARD POSITION



\*  $\theta > 0$  ROTATE COUNTER CLOCKWISE

$\theta < 0$  " " CLOCKWISE

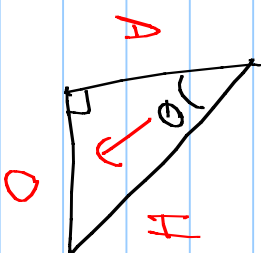
-  $\theta$  IS IN STANDARD POSITION WHEN  $\theta$  IS FORMED WITH THE INITIAL ARM (POSITIVE X-AXIS)

AND THE TERMINAL ARM

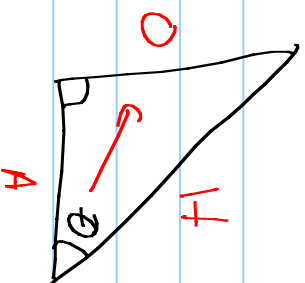
$$\ast \text{ SIN } \theta = \frac{y}{r}$$

SOH CAH TOA

$$\text{COS } \theta = \frac{x}{r}$$



$$\text{TAN } \theta = \frac{y}{x}$$

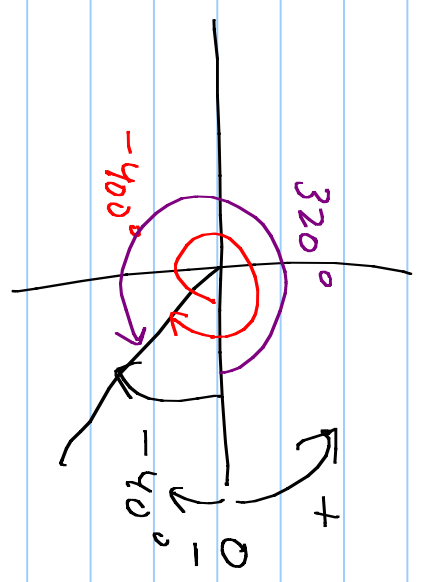
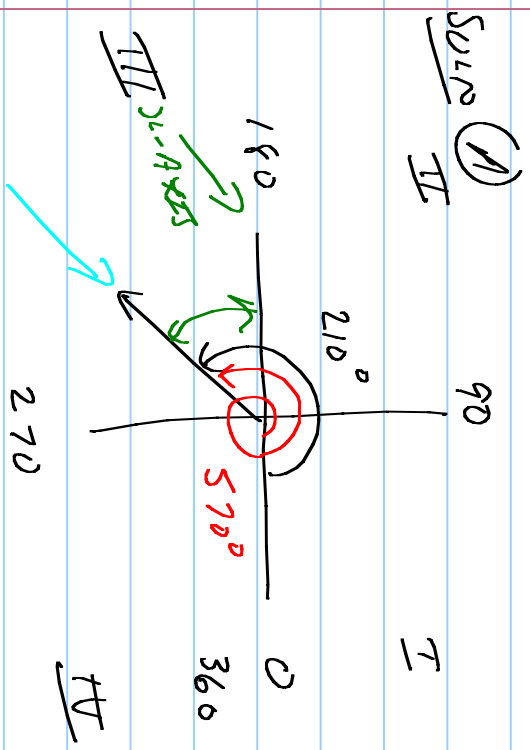


- COTERMINAL ANGLES ARE WHEN TWO OR MORE ANGLES (IN STANDARD POSITION) HAVE "P" IN THE SAME PLACE.

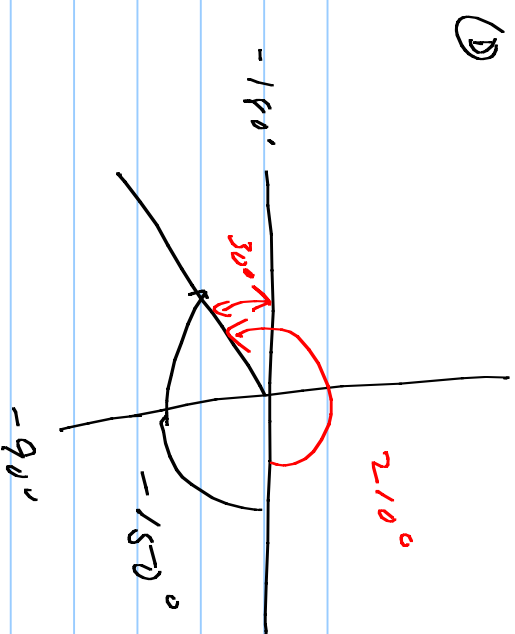
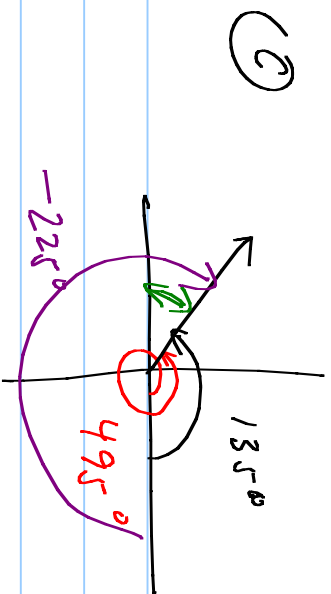
1 TO FIND COTERMINAL ANGLES SIMPLY ADD MULTIPLES OF  $360^\circ$ .

Q5 DRAW  $\theta$  AT  $210^\circ$  AND FIND A COTERMINAL ANGLE

- (A)  $-40^\circ$  (B)  $135^\circ$  (C)  $-150^\circ$  (D)  $320^\circ$



REMAINER ANM



- A REFERENCE ANGLE IS THE ACUTE ANGLE BETWEEN THE TERMINAL ARM AND THE X-AXIS.

BE FIND THE REFERENCE ANGLE FOR THE ABOVE EXAMPLE

A) ANGLE =  $210^\circ$

REFERENCE ANGLE =  $30^\circ$  ( $210^\circ - 180^\circ$ )

$$b) \theta = -40^\circ$$

REFERENCE ANGLE =  $40^\circ$

$$c) \theta = 135^\circ$$

REFERENCE ANGLE =  $45^\circ$  ( $180^\circ - 135^\circ$ )

$$d) \theta = -150^\circ$$

REFERENCE ANGLE =  $30^\circ$

H/W 140 # 1-5, 8, 12

