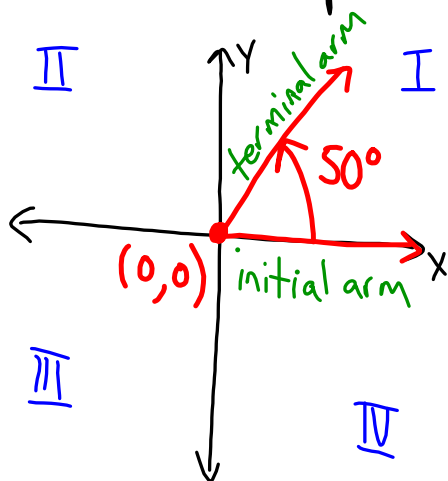


Ch.2 Trig

2.1 Angles in Standard Position

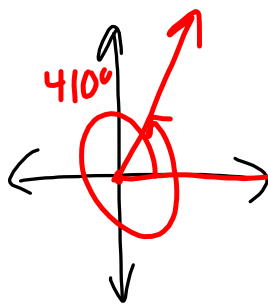
Angles in standard position have the vertex at the origin $(0,0)$ and are measured from the positive x-axis.



positive angles : CCW

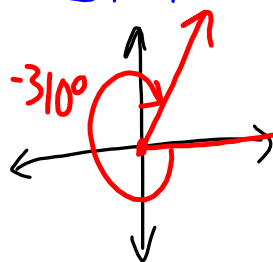
negative angles : CW

Sketch a 410° angle in S.P.



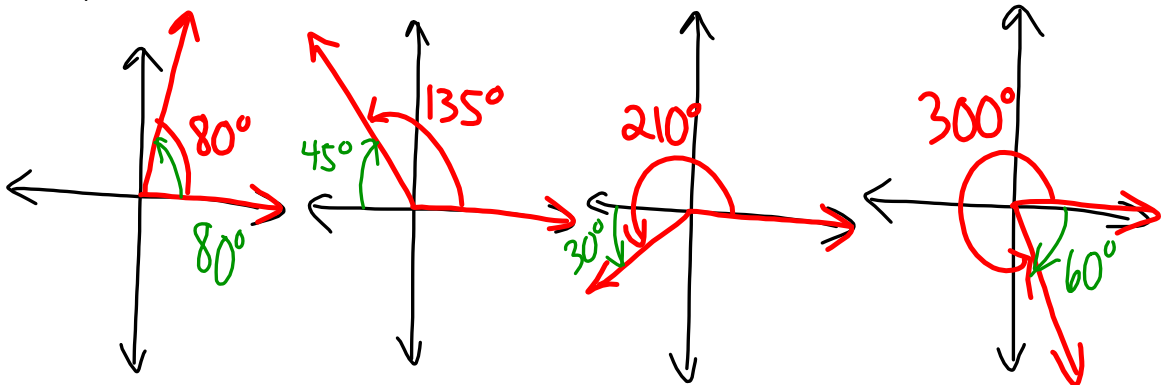
$50^\circ, 410^\circ$ & -310°
are coterminal
angles.

Sketch a -310° angle in S.P.

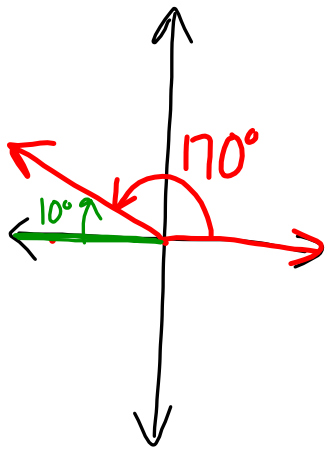


ex) Sketch an angle in S.P. with each of the following measures:

i) 80° ii) 135° iii) 210° iv) 300°



reference angle - the acute ($0^\circ < \theta < 90^\circ$) angle that produces the same



10° is the reference angle for 170° .

terminal arm as the original angle. It is drawn using the x-axis, but not necessarily the positive x-axis.

Sketch & determine ref. angles for the previous example.

ex) Write the 4 angles in S.P. that have 10° as a reference angle. $10^\circ, 170^\circ, 190^\circ, 350^\circ$

ex) Write a rule for each quadrant that relates the ref angle (ref) to the angle in S.P. (θ)

↑
"theta"

I ref = θ

III ref = $\theta - 180^\circ$

II ref = $180^\circ - \theta$

$\theta = 180^\circ + \text{ref}$

$\theta = 180^\circ - \text{ref}$

IV ref = $360^\circ - \theta$

$\theta = 360^\circ - \text{ref}$

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