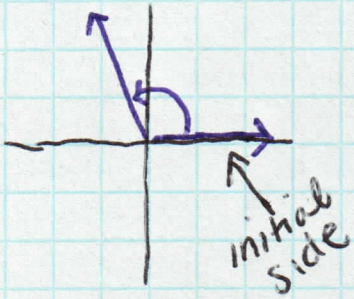
The Trigonometric Functions ☺

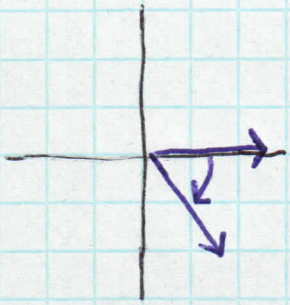
→ Drawing Angles

- Initial side: starting side of an angle
- Terminal side: ending side of an angle
- Standard position: initial side is on the positive x-axis and its vertex is at the origin

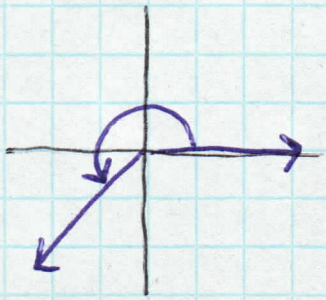
120°



-50°

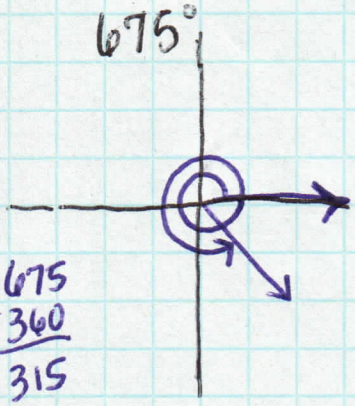


225°



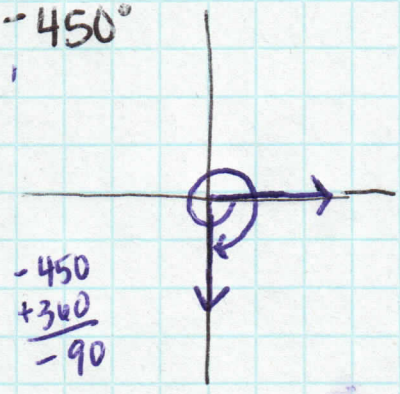
positive: open counter-clockwise (left)
negative: open clockwise (right)

675°

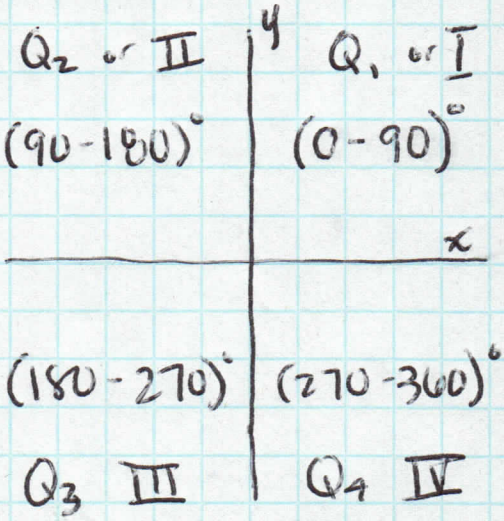


675
-360
315

-450°



-450
+360
-90



Degrees · Minutes · Seconds

20° 12' 32"

Convert from Degrees · minutes · seconds to Decimal

$20° 12'' 32$

$20° + 12\left(\frac{1}{60}\right) + 32\left(\frac{1}{3600}\right)$ or $20° + \frac{12}{60} + \frac{32}{3600}$

≈ 20.2089

$42° 15' 45'' \rightarrow 42 + \frac{15}{60} + \frac{45}{3600} \approx 42.2625$

Convert from Decimal to DMS.

16.28 * degrees stays the same

$.28 \cdot 60 = 16.8$ * multiply decimal by 60, whole # becomes minutes.

$.8 \cdot 60 = 48$ * multiply decimal by 60 for seconds

$16° 16' 48''$

Homework

Convert to Decimal	Convert to DMS
1) $36° 52' 29''$	1) 25.38
2) $35° 19' 34''$	2) 45.25
3) $20° 15' 12''$	3) 16.45