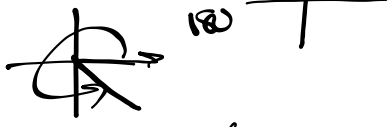
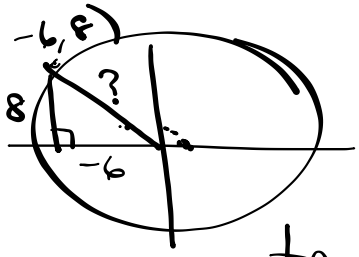
1. Reference Angle for 160°

2. Sketch 300°



3. The terminal arm of θ passes thru the point (-6,8). What are its Trig. Ratios?



$r^2 = (-6)^2 + (8)^2$

$r^2 = 100$

$r = 10$

$\therefore \sin\theta = \frac{8}{10} = \frac{4}{5}$

$\cos\theta = \frac{-6}{10} = \frac{-3}{5}$

$\tan\theta = \frac{8}{-6} = \frac{-4}{3}$

4. In which Quadrants does θ lie if $\cos\theta > 0$?

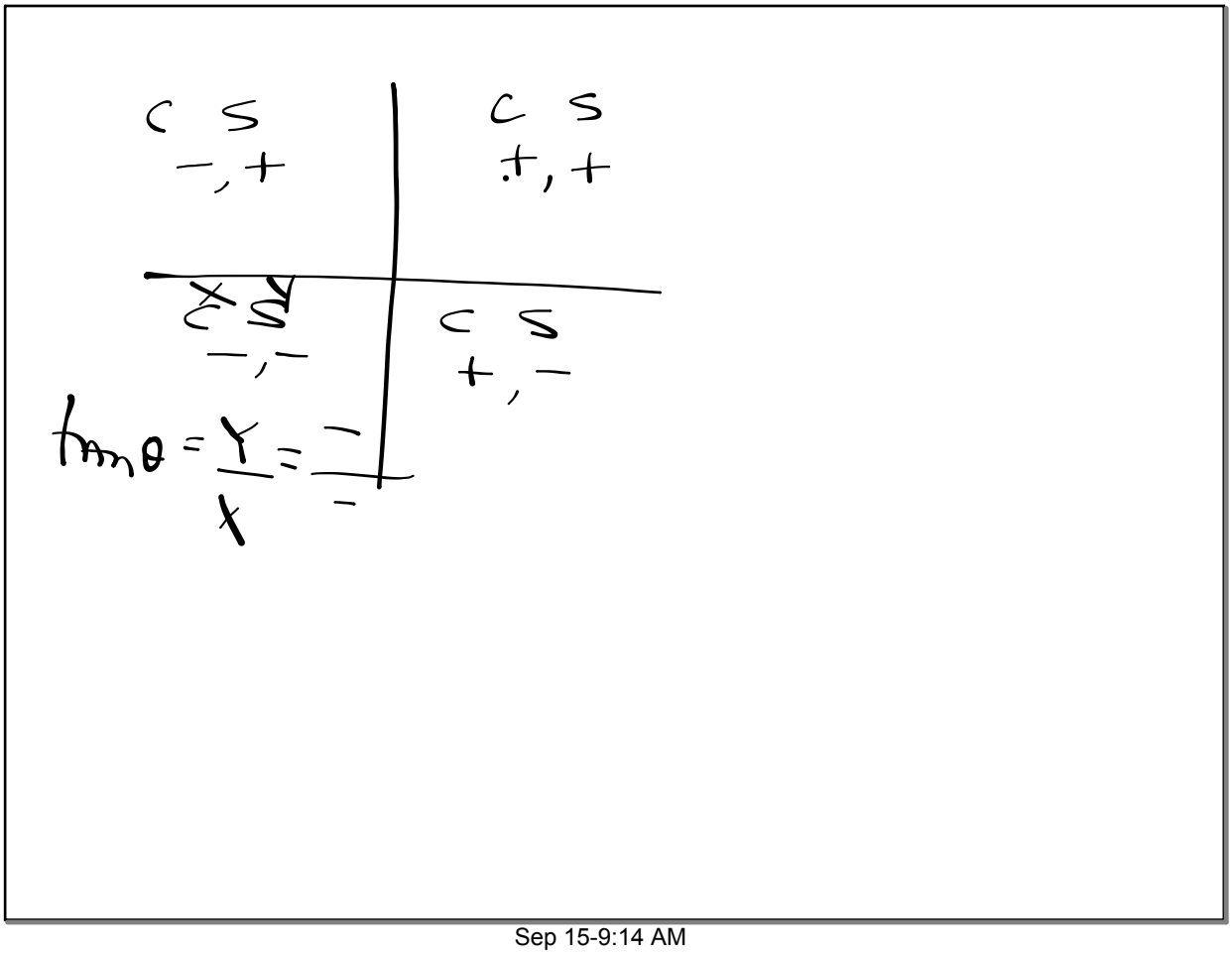
As/Sine.

1 And 4

Sep 15-8:02 AM

II	I
Sin	All
Tan III	Cos IV

Sep 15-9:13 AM



Sep 15-9:14 AM

DETERMINE TRIG RATIOS

1. Suppose θ is an angle in Standard position in Q2, such that $\sin\theta = \frac{+7}{25}$

Calculate $\cos\theta$ and $\tan\theta$.

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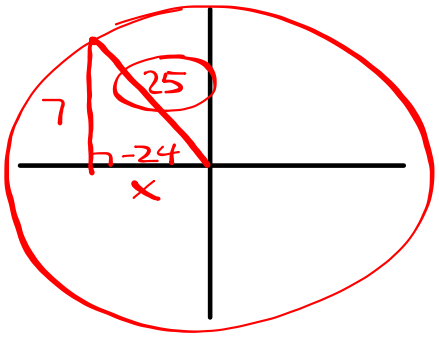


$\cos\theta = \frac{-24}{25}$

$\tan\theta = \frac{7}{-24} = \frac{-7}{24}$

$x^2 + 7^2 = 25^2$

$x^2 = 576$

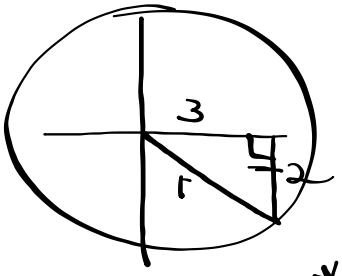
$x = \pm\sqrt{576}$

$x = \pm 24$

Sep 15-9:27 AM

#2 θ lies in Q4. $\tan\theta = \frac{-2}{3}$

$\sin\theta = ?$ $\cos\theta = ?$



$(-2)^2 + (3)^2 = r^2$

$4 + 9 = r^2$

$\pm\sqrt{13} = r$

* Radius is ALWAYS +

$\therefore \sin\theta = \frac{-2}{\sqrt{13}}$

$\cos\theta = \frac{3}{\sqrt{13}}$

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(B) TRIG. Values of QUADRANTALS

→ ANGLES THAT LIE ON THE AXIS.

0°(

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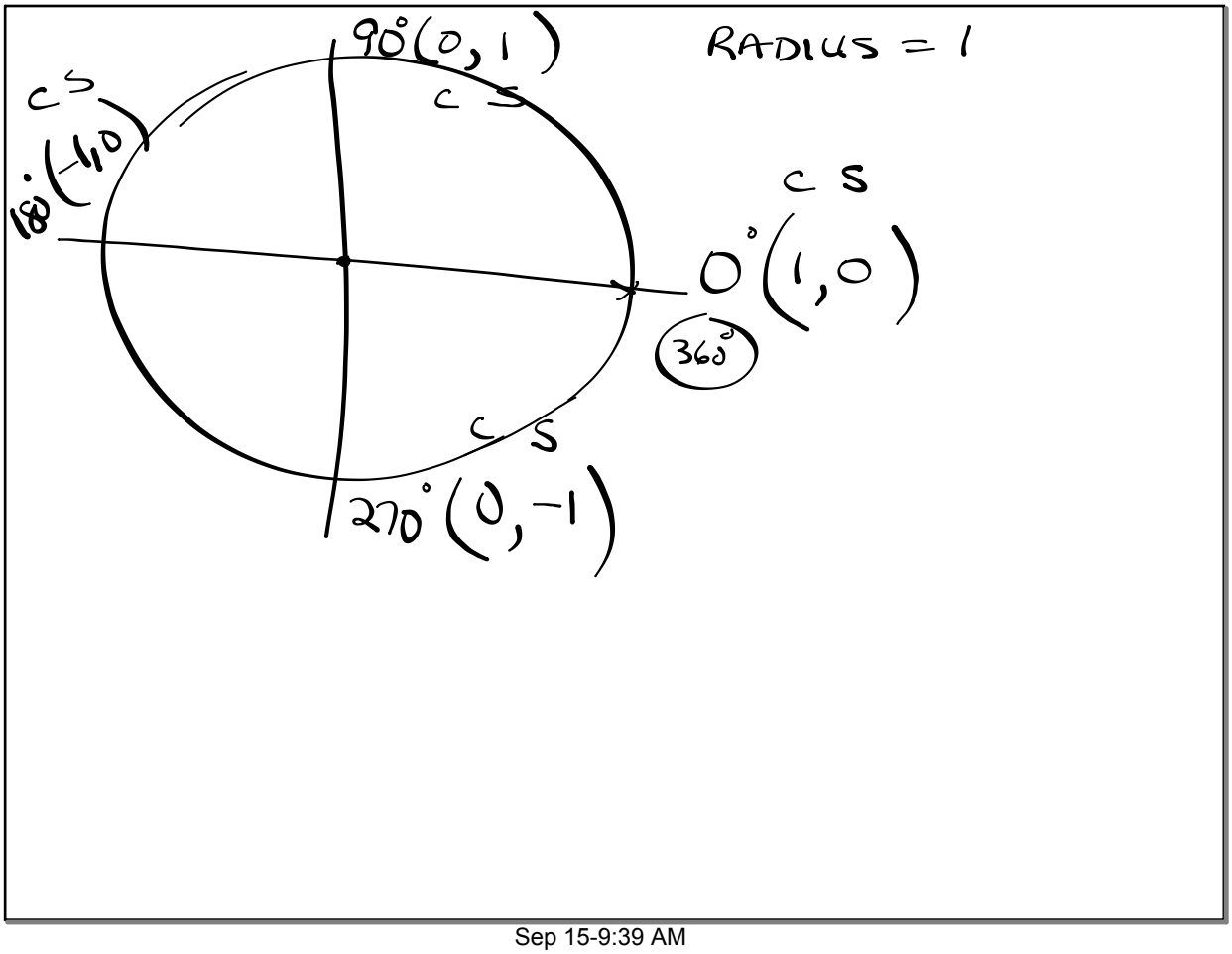

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1. $\sin 90^\circ = 1$

2. $\cos 180^\circ = -1$

3. $\cos 270 = 0$

4. $\tan 0^\circ = \frac{Y}{X} = \frac{0}{1} = 0$

5. $\tan 90^\circ = \frac{1}{0} =$ undefined

Sep 15-9:42 AM

C. Determine θ given an Approximate TRIG. Value.

1. Given $\cos\theta = 0.5132$, determine the measure of θ in standard position.

Soln. I CALCULATE Ref $\angle$.

$\theta_r = \cos^{-1}(.5132)$

$\theta_r = 59^\circ$

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II In which quadrants does θ lie?

$\cos\theta = .5132$ is positive

Q1

$\theta = 59$

QIV

$\theta = 360 - 59$

$\theta = 301$

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2. $\sin\theta = -0.3550$

Soln I. Ref $\angle$ * Do not put (-) in Calculator.

$\theta_r = \sin^{-1}(0.3550)$

$\theta_r = 21°$

II Sin is Neg in Q3 & Q4

$\therefore$ Q3 $\theta = 180 + 21$ Q4 $\theta = 360 - 21$

$\theta = 201$ $\theta = 339°$

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$\theta = 180 - \theta_r$	$\theta = \theta_r$
$\theta = 180 + \theta_r$	$\theta = 360 - \theta_r$

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1. Given $\sin\theta = \frac{-12}{13}$

Calculate $\cos\theta$ and $\tan\theta$

2. If $\sin\theta = -0.8660$, calculate value of θ.

Sep 15-9:56 AM