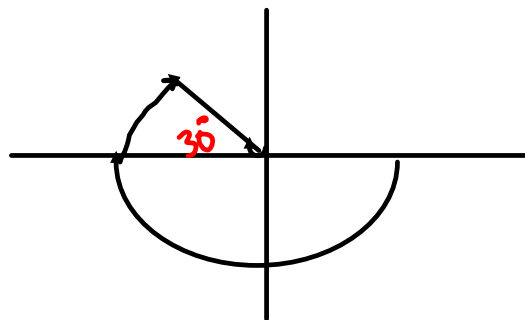


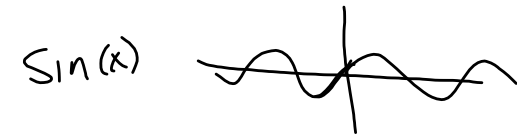
Reference angles: Problem type 1

Find the reference angle for -210° .

ref is 30 degrees

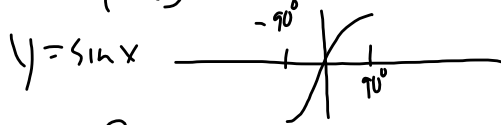


$$\sin^{-1}(\sin(-210^\circ))$$

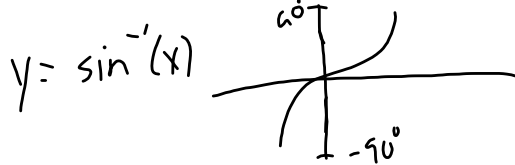


Does it have inverse?

Fails Horizontal Line test



Pass H.L.T.



$\sin^{-1}(\sin(x)) = x$

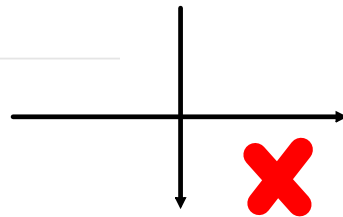
↑ angle ↑ reference angle or like it

Determine the quadrant in which the terminal side of θ lies.

(a) $\cot \theta < 0$ and $\cos \theta > 0$ $y-$ $x+$ (choose one) ▼ q4
(b) $\sec \theta > 0$ and $\sin \theta > 0$ $x+$ $y+$ (choose one) ▼ q1

$x = \cos \theta \quad ++$

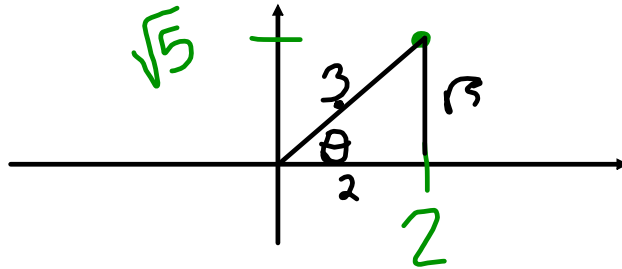
$x/y = \cot \theta \quad --$ means $y --$



Finding values of trigonometric functions given information about an angle: Problem type 1

Let $(2, \sqrt{5})$ be a point on the terminal side of θ .

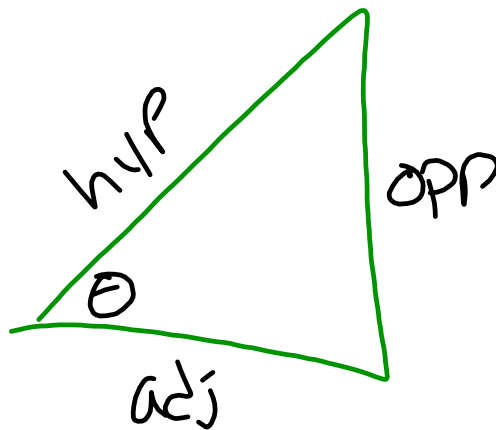
Find the exact values of $\sin\theta$, $\sec\theta$, and $\tan\theta$.



$$\begin{aligned} 2^2 + \sqrt{5}^2 &= r^2 \\ 4 + 5 &= r^2 \\ 3 &= r \end{aligned}$$

$$\sin\theta = \frac{y}{r} = \frac{\sqrt{5}}{3}$$

$$\textcircled{S} \sin = \frac{\textcircled{opp}}{\textcircled{hyp}} \quad \text{SOH}$$



$$\sin\theta = \frac{\text{opp}}{\text{hyp}} \quad \text{SOH}$$

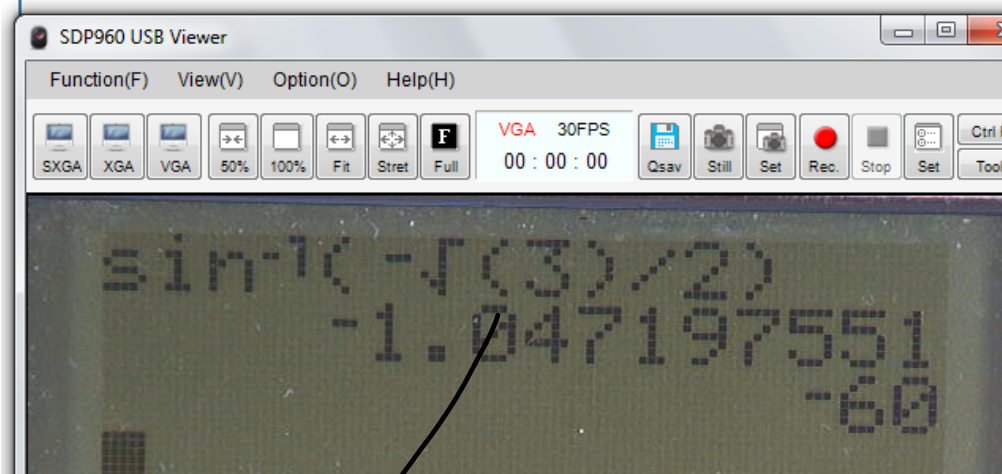
$$\cos\theta = \frac{\text{adj}}{\text{hyp}} \quad \text{CAH}$$

$$\tan\theta = \frac{\text{opp}}{\text{adj}} \quad \text{TOA}$$

Values of inverse trigonometric functions

Find the exact value of $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)$. $= -60 \cdot \frac{\pi}{180} = -\frac{\pi}{3}$

Write your answer in radians in terms of π .



Function	Meaning
Inverse Sine Function	$y = \sin^{-1}x$ means that $\sin y = x$ and y is in $\left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$
Inverse Cosine Function	$y = \cos^{-1}x$ means that $\cos y = x$ and y is in $[0, \pi]$
Inverse Tangent Function	$y = \tan^{-1}x$ means that $\tan y = x$ and y is in $\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$

- Final (2-3 hrs)
- Midterm / Test 3
- Old Test
- Old Quizzes
- Homework Missed

No Drinks
(Bring H₂O bottle)

Food
(Bring Food Candy)

No Artificial Sweeteners
No Artificial Salts (MSG)

No Mexican No Chinese

Indian, Italian, Bunsen, ~~Cheese~~