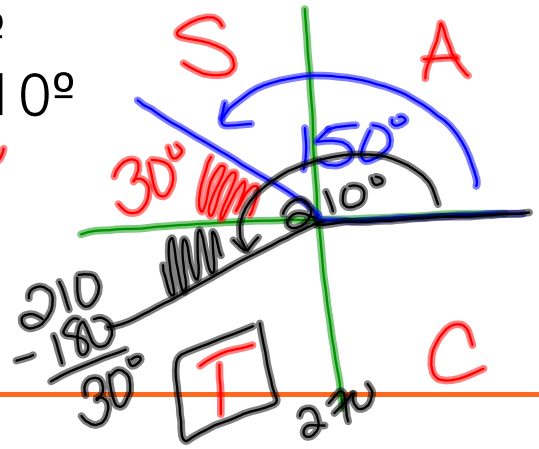
Warm Up:

Which expression is *not* equivalent to sin150º?

(1) sin30º
(2) −sin210º
(3) $\sin\frac{11\pi}{6}$
(4) $-\sin\frac{11\pi}{6}$



sin(150 .5
sin(30 .5
-sin(210 .5
sin(11π/6 -.5
-sin(11π/6 .5

Finding Values of Trig Functions
(given certain information)

Given: 1 Function & 1 Quadrant

If $\sin\theta = 5/13$ and θ is the measure of an angle in the 2nd quadrant, find

a) $\cos\theta$ b) $\tan\theta$

$\pm$

$\sin\theta = \frac{5}{13}$ (O, H)

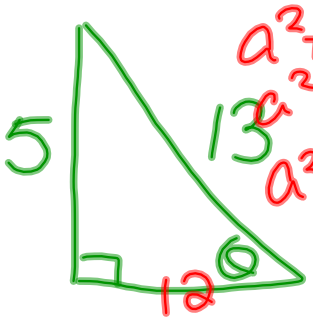
S | A
T | C

in QII

SOH CAH TOA

a) $\cos\theta = -\frac{12}{13}$

b) $\tan\theta = -\frac{5}{12}$

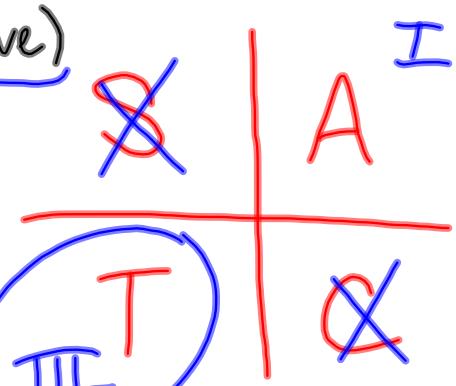


$a^2+b^2=c^2$
$a^2+5^2=13^2$
$a^2+25=169$
$a^2=144$
$a=12$

If $\tan A = \sqrt{7}/3$ and $\sin A<0$, find $\cos A$.

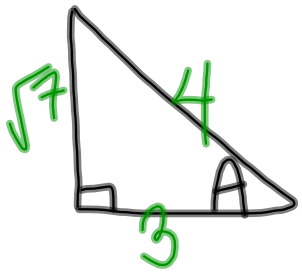
$\tan A = +\frac{\sqrt{7}}{3}$ (O, A)

$\sin A < 0$ (negative)



$\cos A = -\frac{3}{4}$

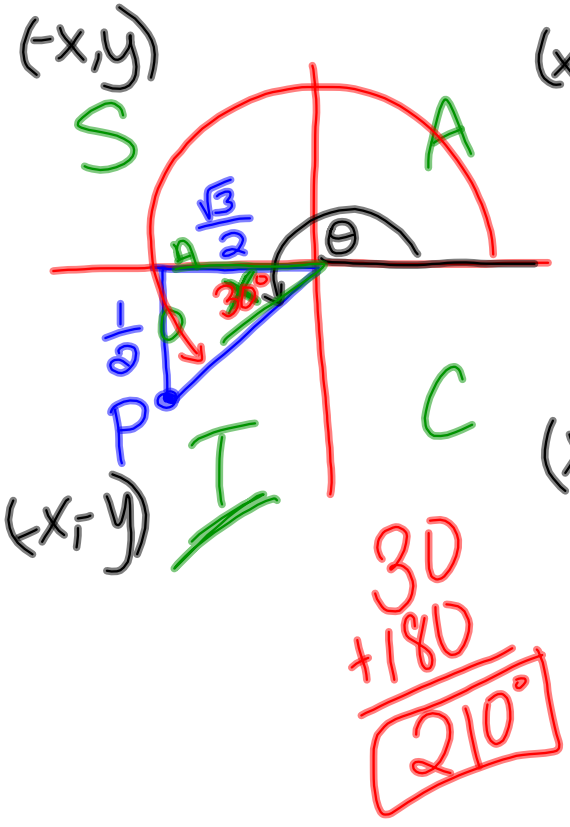
CAH



$\sqrt{7}^2+3^2=c^2$
$7+9=c^2$
$16=c^2$
$4=c$

Given: A point

Find the measure of θ given P(-√3/2, -1/2).



$\tan x = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}}$

$\tan x = \frac{1}{\sqrt{3}}$

$\tan^{-1}\left(\frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}}\right)$ .5235987756

30

Regents Example: June 2016

A circle centered at the origin has a radius of 10 units. The terminal side of an angle, θ, intercepts the circle in Quadrant II at point C. The y-coordinate of point C is 8. What is the value of $\cos\theta$?

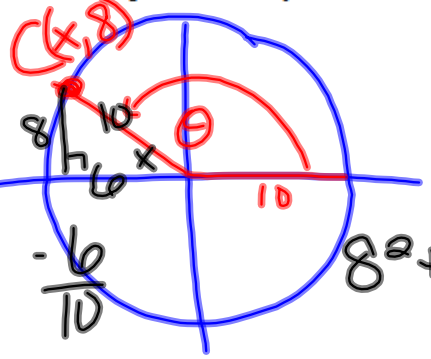
1) $-\frac{3}{5}$

2) $-\frac{3}{4}$

3) ~~$\frac{3}{5}$~~

4) ~~$\frac{4}{5}$~~

CAH



$-\frac{6}{10}$

$8^2+b^2=10^2$

$b^2=36$

Regents Example: June 2018

An angle, θ, is in standard position and its terminal side passes through the point $(2,-1)$. Find the *exact* value of $\sin\theta$.