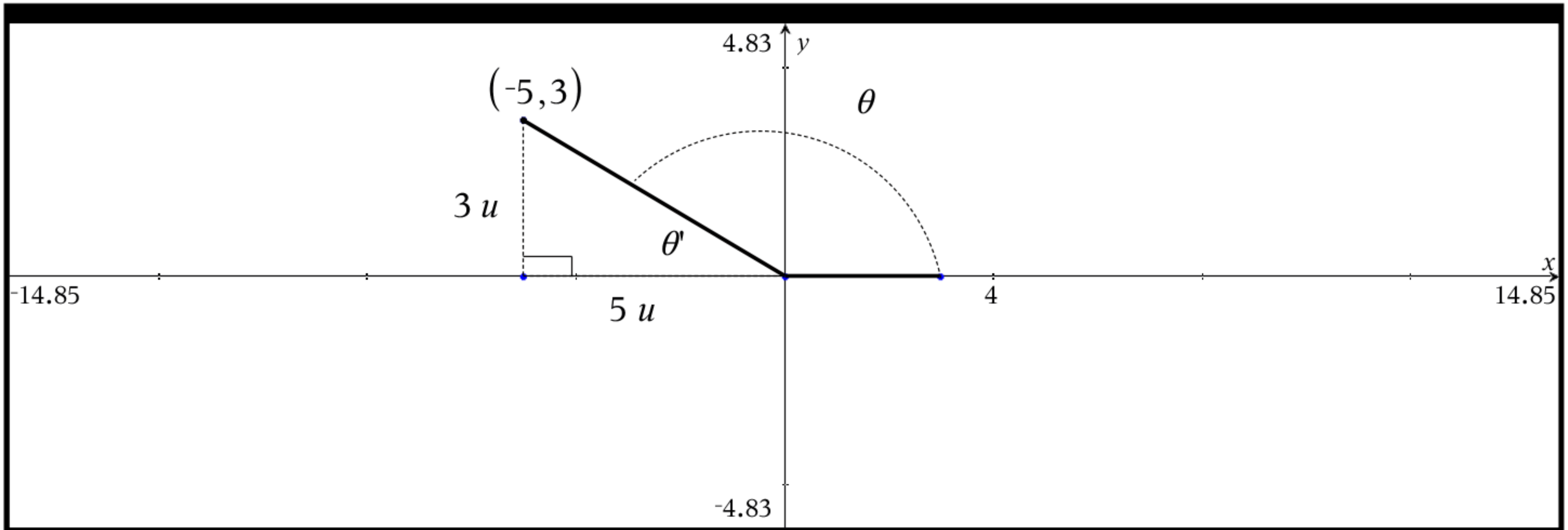


x = -5 y= 3 $r^2 = x^2 + y^2 = (-5)^2 + (3)^2 = 25 + 9 = 34$ implies r = √ (34) = $\sqrt{34}$

θ ≈ 149.036 °≈2.60117 radians θ' =reference angle ≈30.9638 °≈0.54042 radians

$\sin\theta = 3/\sqrt{34} = \frac{3\cdot\sqrt{34}}{34}$ $\cos\theta = -5/\sqrt{34} = \frac{-5\cdot\sqrt{34}}{34}$ $\tan\theta = 3/-5 = \frac{-3}{5}$

$\csc\theta = \sqrt{34}/3 = \frac{\sqrt{34}}{3}$ $\sec\theta = \sqrt{34}/-5 = \frac{-\sqrt{34}}{5}$ $\cot\theta = -5/3 = \frac{-5}{3}$

NEVER calculate the reference angle in any quadrant BUT quadrant 1,
THEN reference into quadrant that the point lies in

$\sin\theta' = 3/\sqrt{34} = \frac{3\cdot\sqrt{34}}{34}$ $\theta' = \sin^{-1}(3/\sqrt{34}) \approx 30.9638°$

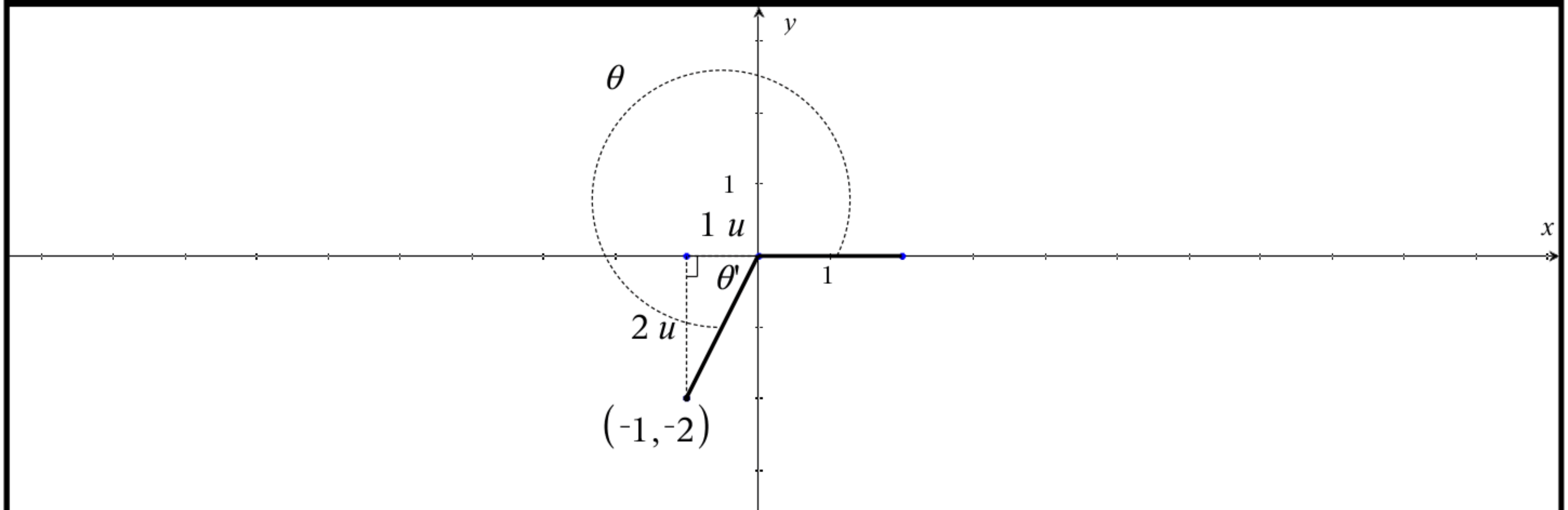
Since this point $(^-5, 3)$ is in quadrant 2 $\theta = 180° - \sin^{-1}(3/\sqrt{34}) \approx 149.036°$

$\cos\theta' = 5/\sqrt{34} = \frac{5\cdot\sqrt{34}}{34}$ $\theta' = \cos^{-1}(5/\sqrt{34}) \approx 30.9638°$

Since this point $(^-5, 3)$ is in quadrant 2 $\theta = 180° - \cos^{-1}(5/\sqrt{34}) \approx 149.036°$

$\tan\theta' = 3/5 = \frac{3}{5}$ $\theta' = \tan^{-1}(3/5) \approx 30.9638°$

Since this point $(^-5, 3)$ is in quadrant 2 $\theta = 180° - \tan^{-1}(3/5) \approx 149.036°$



x = -1 y = -2 $r^2 = x^2 + y^2 = (-1)^2 + (-2)^2 = 1 + 4 = 5$ implies r = √(5) = $\sqrt{5}$

θ ≈ 243.435° ≈ 4.24874 radians θ' = reference angle ≈ 63.4349° ≈ 1.10715 radians

$\sin\theta = -2/\sqrt{5} = \frac{-2\cdot\sqrt{5}}{5}$ $\cos\theta = -1/\sqrt{5} = \frac{-\sqrt{5}}{5}$ $\tan\theta = -2/-1 = 2$

$\csc\theta = \sqrt{5}/-2 = \frac{-\sqrt{5}}{2}$ $\sec\theta = \sqrt{5}/-1 = -\sqrt{5}$ $\cot\theta = -1/-2 = \frac{1}{2}$

NEVER calculate the reference angle in any quadrant BUT quadrant 1,

THEN reference into quadrant that the point lies in

sin θ' $=2/\sqrt{5}=\frac{2\cdot\sqrt{5}}{5}$ θ'$=\sin^{-1}(2/\sqrt{5})\approx 63.4349°$

Since this point ($^-1$, $^-2$) is in quadrant 3 θ$=180°+\sin^{-1}(2/\sqrt{5})\approx 243.435°$

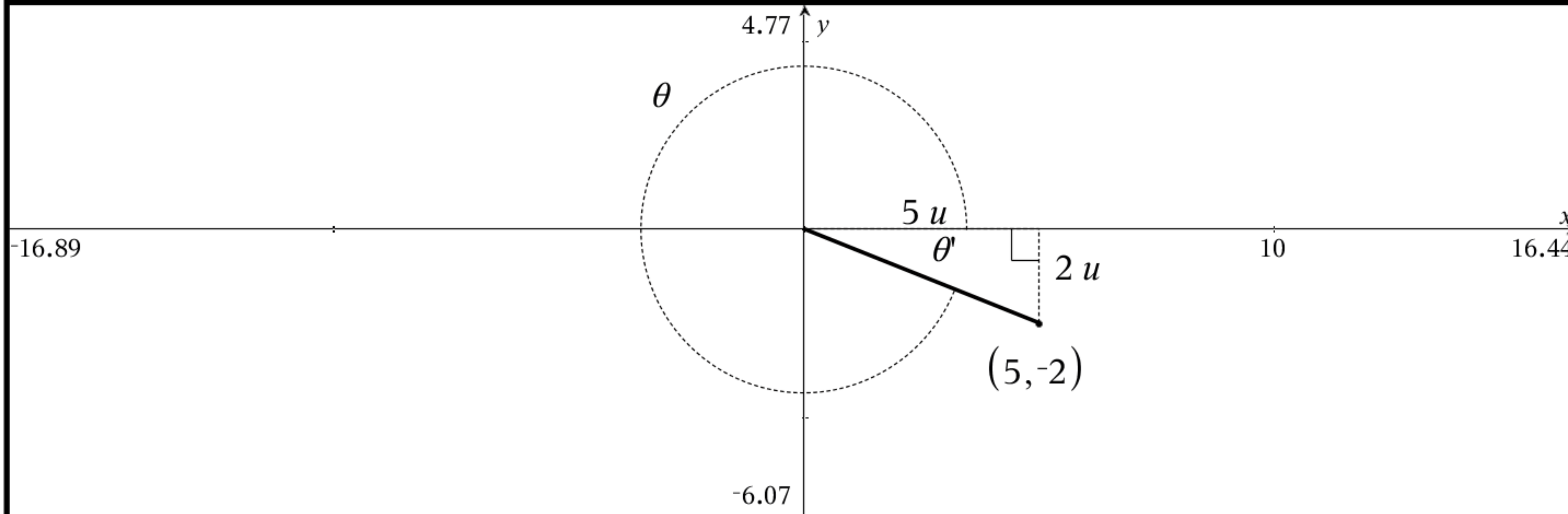
cos θ' $=1/\sqrt{5}=\frac{\sqrt{5}}{5}$ θ'$=\cos^{-1}(1/\sqrt{5})\approx 63.4349°$

Since this point ($^-1$, $^-2$) is in quadrant 3 θ$=180°+\cos^{-1}(1/\sqrt{5})\approx 243.435°$

tan θ' $=2/1=2$ θ'$=\tan^{-1}(2/1)\approx 63.4349°$

Since this point ($^-1$, $^-2$) is in quadrant 3 θ$=180°+\tan^{-1}(2/1)\approx 243.435°$

Quadrant 4



x $=5$ y $=-2$ $r^2 = x^2 + y^2 = (5)^2 + (-2)^2 = 25 + 4 = 29$ implies r = $\sqrt{(29)} = \sqrt{29}$

θ ≈ 338.199 °≈5.90268 radians θ' =reference angle ≈21.8014 °≈0.380506 radians

sin θ $= -2/\sqrt{29} = \frac{-2\cdot\sqrt{29}}{29}$ cos θ $= 5/\sqrt{29} = \frac{5\cdot\sqrt{29}}{29}$ tan θ $= -2/5 = \frac{-2}{5}$

csc θ $= \sqrt{29}/-2 = \frac{-\sqrt{29}}{2}$ sec θ $= \sqrt{29}/5 = \frac{\sqrt{29}}{5}$ cot θ $= 5/-2 = \frac{-5}{2}$

NEVER calculate the reference angle in any quadrant BUT quadrant 1, THEN reference into quadrant that the point lies in

$\sin\theta' = 2/\sqrt{29} = \dfrac{2\cdot\sqrt{29}}{29}$ $\theta' = \sin^{-1}(2/\sqrt{29}) \approx 21.8014°$

Since this point $(5, {}^{-}2)$ is in quadrant 4 $\theta = 360° - \sin^{-1}(2/\sqrt{29}) \approx 338.199°$

$\cos\theta' = 5/\sqrt{29} = \dfrac{5\cdot\sqrt{29}}{29}$ $\theta' = \cos^{-1}(5/\sqrt{29}) \approx 21.8014°$

Since this point $(5, {}^{-}2)$ is in quadrant 4 $\theta = 360° - \cos^{-1}(5/\sqrt{29}) \approx 338.199°$

$\tan\theta' = 2/5 = \dfrac{2}{5}$ $\theta' = \tan^{-1}(2/5) \approx 21.8014°$

Since this point $(5, {}^{-}2)$ is in quadrant 4 $\theta = 360° - \tan^{-1}(2/5) \approx 338.199°$