

$\cos \rightarrow X$ $\tan \rightarrow \frac{Y}{X}$
 $\sin \rightarrow Y$

4.1 Inverse Trig Values on the Unit Circle

SOHCAHTOA **CosecSecAco**

Find the exact value(s) of θ (in degrees), where $0^\circ \leq \theta < 360^\circ$

1. $\theta = \cos^{-1} \left(-\frac{\sqrt{3}}{2} \right)$ **A** **H** **QII & QIII**

$(-1)^2 + y^2 = 2^2$
 $y = 1$

150° **210°**

4. $\cos \theta = \left(-\frac{1}{\sqrt{2}} \right)$

$\theta = \cos^{-1} \left(-\frac{1}{\sqrt{2}} \right)$

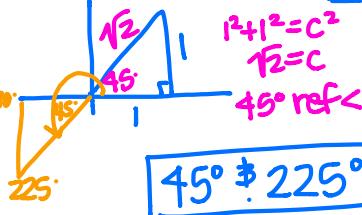
45° ref \angle

135° **225°**

2. $\theta = \sin^{-1} \left(\frac{\sqrt{3}}{2} \right)$

60° **120°**

5. $\theta = \arctan \left(1 \right)$ **O** **T** **A** **QI & III**



7. $\theta = \cos^{-1} (-1)$

x-coordinate = -1

180°

8. $\theta = \sin^{-1} (0)$

y-coordinate = 0

0° **180°**

Name: _____

S only sine & csc positive

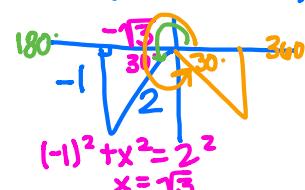
A all trig positive

T tan/cot positive

C cos/sec positive

3. $\theta = \arcsin \left(-\frac{1}{2} \right)$ **O** **H**

$\theta = \sin^{-1} \left(-\frac{1}{2} \right)$

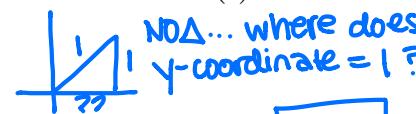


QIII & QIV

30° ref \angle

210° **330°**

6. $\theta = \arcsin (1)$

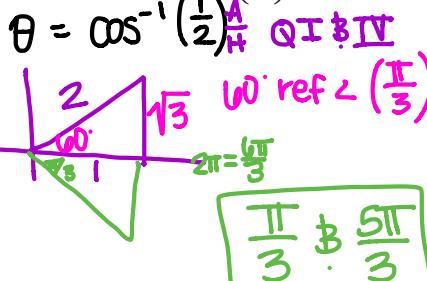


9. $\tan \theta = (-1)$

135° **315°**

Find the exact value(s) of θ (in radians), where $0 \leq \theta < 2\pi$

10. $\theta = \arccos \left(\frac{1}{2} \right)$



11. $\sin \theta = (-1)$

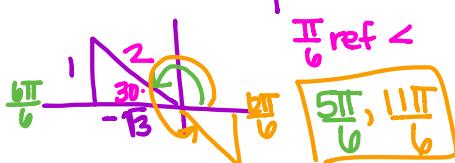
$\theta = \sin^{-1} (-1)$

3pi/2

12. $\theta = \cos^{-1} (0)$

pi/2 **3pi/2**

13. $\theta = \cot^{-1} \left(-\sqrt{3} \right)$ **A** **O** **QII & IV**



14. $\theta = \arccos \left(-\frac{1}{\sqrt{2}} \right)$

3pi/4, **5pi/4**

15. $\tan \theta = \left(\frac{-1}{\sqrt{3}} \right)$ **O** **A**

5pi/6, **11pi/6**