

-50
-41π
310

Convert to radians:

1. $35^\circ \frac{\pi}{180} = \frac{7\pi}{36}$

2. $-410^\circ \frac{\pi}{180} = \frac{310\pi}{18}$

$140^\circ \frac{\pi}{180} = \frac{7\pi}{9}$

Convert to degrees:

4. $\frac{5\pi}{8} \cdot \frac{180}{\pi} = 112.5^\circ$

5. $-\frac{7\pi}{6} \cdot \frac{180}{\pi} = -210^\circ$

6. $\frac{11\pi}{3} \cdot \frac{180}{\pi} = 1980^\circ$

$\cos 60^\circ = \frac{1}{2}$

Find two other angles, one negative and one positive, which are coterminal to θ .

7. $\theta = 60^\circ$
+360 = 420
-360 = -300

8. $\theta = 210^\circ$
+360 = 570
-360 = -150

9. $\theta = 341^\circ$
+360 = 701
-360 = -19

10. $\theta = -\pi$
+2π = π
-2π = -3π

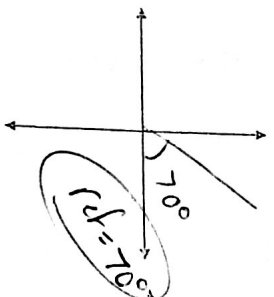
Name the quadrant in which the angle θ lies.

11. $\sin \theta > 0, \cos \theta > 0$
+ + I

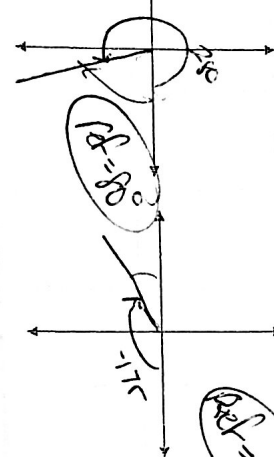
12. $\cos \theta < 0, \tan \theta < 0$
- - II

13. Draw each angle in standard position, and find its reference angle.

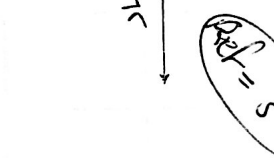
$\theta = 70^\circ$



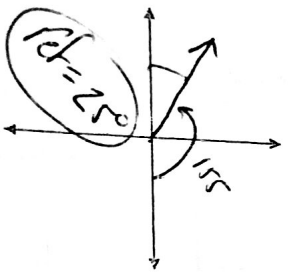
$\theta = 280^\circ$



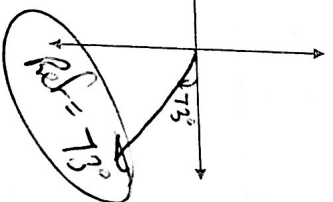
$\theta = -175^\circ$



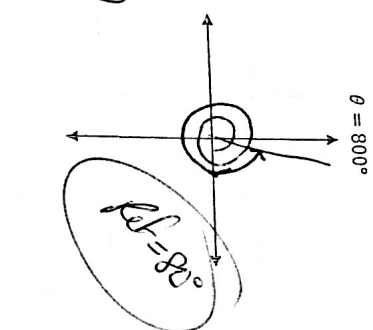
$\theta = 155^\circ$



$\theta = -73^\circ$



$\theta = 800^\circ$



14. Find the exact value of each trig ratio:

a. $\cos 45^\circ = \frac{\sqrt{2}}{2}$

b. $\sin 30^\circ = \frac{1}{2}$

c. $\sin 150^\circ = \frac{1}{2}$

d. $\tan 225^\circ = \frac{-\sqrt{2}}{-1} = 1$

e. $\sin 180^\circ = 0$

f. $\cos 225^\circ = \frac{-\sqrt{2}}{2}$

g. $\sin 315^\circ = \frac{-\sqrt{2}}{2}$

h. $\sin 360^\circ = 0$

i. $\cos 450^\circ = \frac{1}{2}$

j. $\tan 720^\circ = 0$

k. $\cos(-60^\circ) = \frac{1}{2}$

l. $\sin(-150^\circ) = \frac{1}{2}$

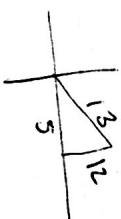
m. $\tan(3\pi/4) = \frac{\sqrt{2}}{-\sqrt{2}} = -1$

n. $\sin(3\pi/4) = \frac{\sqrt{2}}{2}$

o. $\cos(-\pi/3) = \frac{1}{2}$

p. $\cos 6\pi = 1$

15. Suppose $\cos \theta = \frac{5}{13}$ and θ is a 1st quadrant angle. Find $\tan \theta$.

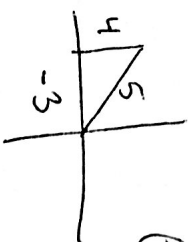


$5^2 + x^2 = 13^2$
 $x = 12$

$\tan \theta = \frac{12}{5}$

$\boxed{\frac{12}{5}}$

16. Find $\sin \theta$ if $(-3, 4)$ lies on the terminal ray of the angle.



$(-3)^2 + 4^2 = c^2$
 $c = 5$

$\sin \theta = \frac{4}{5}$

$\boxed{\frac{4}{5}}$