Intro To Trig Review #2 Name_____

Convert to radian measures in terms of π.

$345° \times \frac{\pi}{180°}$ $\underline{23\pi/12}$

2. $-210° \times \frac{\pi}{180°}$ $\underline{-7\pi/6}$

Convert to Degrees.

3. $\frac{5\pi}{4} \times \frac{180°}{\pi}$ $\underline{225°}$

4. $-\frac{11\pi}{6} \times \frac{180°}{\pi}$ $\underline{-330°}$

Name one positive and one negative angle coterminal with θ.

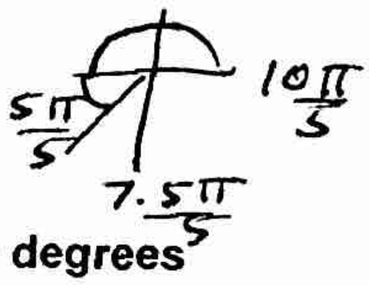
5. $\theta = -540°$ $\underline{-180°, 180°}$

6. $\theta = \frac{11\pi}{4}$ $\underline{\frac{3\pi}{4}, -\frac{5\pi}{4}}$

In which quadrant does θ lie?

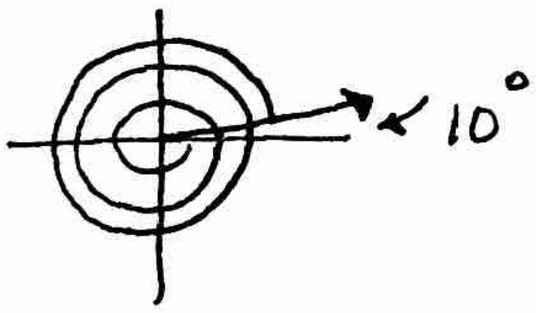
7. $\theta = -157°$  $\underline{Q3}$

8. $\theta = \frac{7\pi}{5}$ $\underline{Q3}$

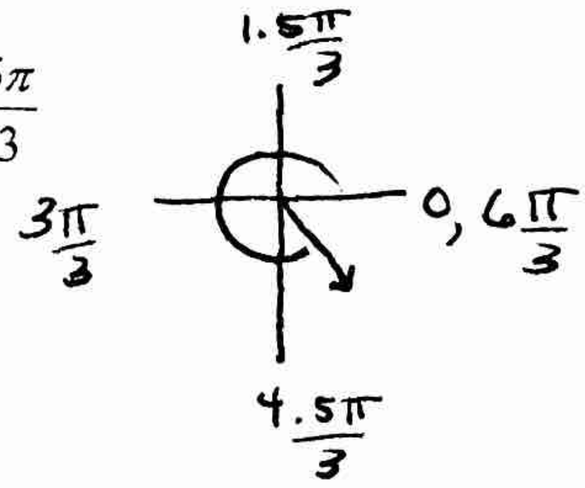


Sketch the indicated angle in standard position. Indicate the direction of rotation and the degrees where necessary.

9. $-1070°$



10. $\frac{5\pi}{3}$



Find the complement and supplement of each angle.

11. 13° C: $90° - 13° = 77°$
S: $180° - 13° = 167°$

12. $\frac{\pi}{6}$ C: $\frac{3\pi}{6} - \frac{\pi}{6} = \frac{2\pi}{6} = \frac{\pi}{3}$
S: $\frac{6\pi}{6} - \frac{\pi}{6} = \frac{5\pi}{6}$

Find the exact value (use unit circle).

13. $\sin\frac{11\pi}{3}$ $\underline{-\frac{\sqrt{3}}{2}}$

14. $\cos 570°$ $\underline{-\frac{\sqrt{3}}{2}}$

15. ~~tan 705°~~ ← coterminal angle is 345° OMIT (sorry, not on unit circle)

$\sec\frac{14\pi}{6}$ $\underline{2}$

17. $\csc(225°)$ $\underline{-\sqrt{2}}$

18. $\cot\frac{2\pi}{3}$ $\underline{-\sqrt{3}/3}$

Find the exact value (use the unit circle).

19. $\tan^{-1}(-1)$ -45°

20. $\sec^{-1}\left(\frac{2\sqrt{3}}{3}\right)$ 30°

21. $\csc^{-1}(-2)$ -30°

22. $\cot^{-1}\sqrt{3}$ 30°

23. $\sec^{-1}(und)$ 90°

this occurs when 0 is in the denominator

24. $\csc^{-1}(-\sqrt{2})$ -45°

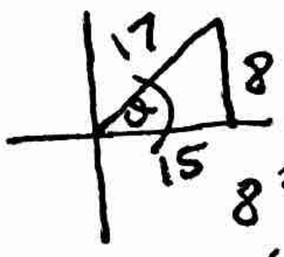
Look for angle θ where cos = 0

Use the given information to find the specified trig value.

25. $\sin\theta = \frac{8}{17}$ in Q1; find $\sec\theta$

opp, hyp

$\sec\theta = \frac{1}{\cos\theta} = \frac{hyp}{adj}$



$\boxed{\sec\theta = \frac{17}{15}}$

$8^2 + b^2 = 17^2$

$64 + b^2 = 289$

$b^2 = 225$

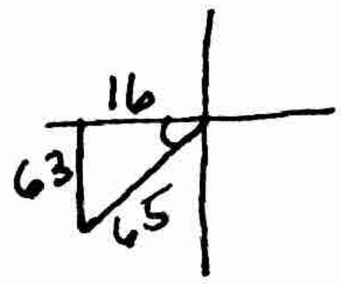
$b = 15$

26. $\tan\theta = \frac{63}{16}$ in Q3; find $\sin\theta$

opp, adj

must be negative in Q3

$\sin\theta = \frac{opp}{hyp}$



$63^2 + 16^2 = c^2$

$3969 + 256 = c^2$

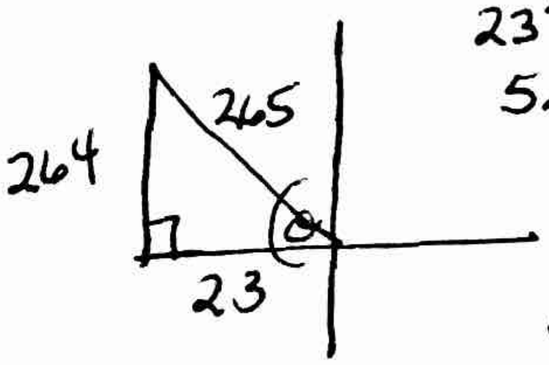
$4225 = c^2$

$65 = c$

$\boxed{\sin\theta = \frac{-63}{65}}$

Given the point passing through the circle, find the specified trig value:

27. (-23, 264); find $\cot\theta$ negative in Q2



$23^2 + 264^2 = c^2$

$529 + 69696 = c^2$

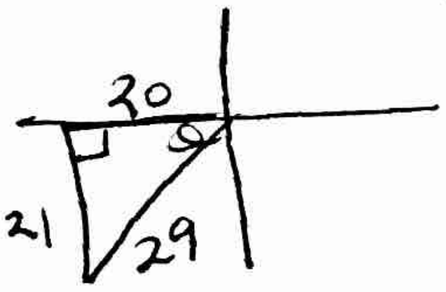
$70225 = c^2$

$265 = c$

$\boxed{\cot\theta = \frac{-23}{264}}$

$\cot\theta = \frac{1}{\tan\theta} = \frac{ADJ}{opp}$

28. (-20, -21); find $\csc\theta$ negative in Q3



$20^2 + 21^2 = c^2$

$400 + 441 = c^2$

$841 = c^2$

$c = 29$

$\csc\theta = \frac{1}{\sin\theta} = \frac{hyp}{opp}$

$\boxed{\csc\theta = \frac{-29}{21}}$

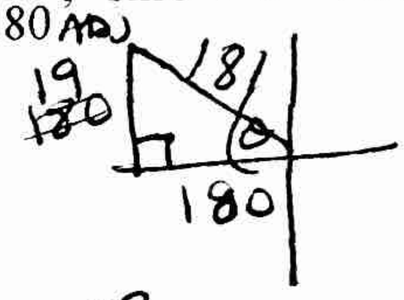
Find the specified trig functions using the given information.

29. $\tan\theta = -\frac{19}{180}$, $\sin\theta > 0$ Find the cosθ and sinθ.

opp, adj

Graph lies in Q2

	X
X	X



$19^2 + 180^2 = c^2$

$361 + 32{,}400 = c^2$

$32{,}761 = c^2$

$c = 181$

$\cos\theta = \frac{-180}{181}$

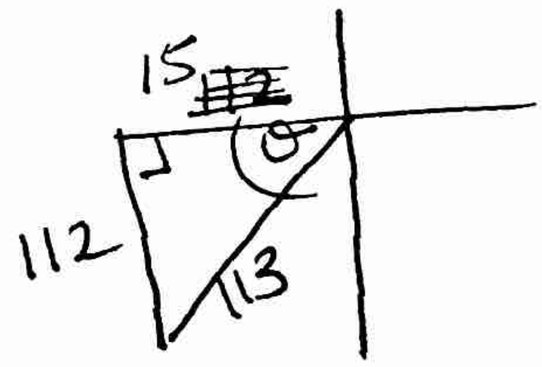
$\sin\theta = \frac{19}{181}$

30. $\sin\theta = -\frac{112}{113}$, $\cos\theta < 0$ Find the tanθ and secθ.

opp, hyp

Graph in Q3

X	X
X	X



$112^2 + b^2 = 113^2$

$12{,}544 + b^2 = 12{,}769$

$b^2 = 225$

$b = 15$

$\tan\theta = \frac{112}{15}$

$\sec\theta = \frac{-113}{15}$

$\frac{1}{\cos} = \frac{hyp}{adj}$