Unit Circle RWS Preparing for Quiz Wednesday, _____

#1-4, State the quadrant where the angle lies.

1. $\frac{3\pi}{5}$ II 2. - 290° I 3. $-\frac{7\pi}{3}$ IV 4. 185° III

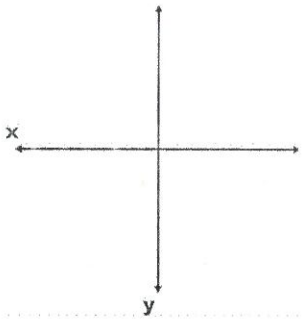
#5-8, Find the **reference angle**.

5. $-\frac{7\pi}{10}$ $\frac{3\pi}{10}$ 6. 133° 47 7. $\frac{\pi}{9}$ $\pi/9$ 8. 200° 20

#9-12, Find a positive and negative **coterminal angle**.

9. $\frac{\pi}{7}$ $-\frac{13\pi}{7}$ $\frac{15\pi}{7}$ 10. -100° 260° -460°

11. $\frac{3\pi}{5}$ $-\frac{7\pi}{5}$ $\frac{13\pi}{5}$ 12. 200° -160° 560°



#13-16, **Convert** the degrees to radian and radians to degrees. Answer in exact form (no decimals)

13. $\frac{2\pi}{9}$ $\frac{180}{\pi} = \frac{x}{\frac{2\pi}{9}}$ 40°

14. 320° $\frac{320}{x} = \frac{180}{\pi}$ $\frac{180x}{180} = \frac{320\pi}{180}$ $x = \frac{16}{9}\pi$

15. $\frac{3\pi}{5}$ $\frac{\frac{3\pi}{5}}{x} = \frac{\pi}{180}$ $\pi x =$ 108°

16. 65° $\frac{180}{\pi} = \frac{65}{x}$ $180x = 65\pi$ $x = \frac{13\pi}{36}$

#17-26, Find one solution in exact form ~~without~~ using a calculator.

17. Sin 240° $-\frac{\sqrt{3}}{2}$ 18. Cos $\frac{-\pi}{4}$ $\frac{\sqrt{2}}{2}$ 19. Tan -120° $\sqrt{3}$ 20. Sin $\frac{15\pi}{4}$ $-\frac{\sqrt{2}}{2}$

21. Tan 225° 1

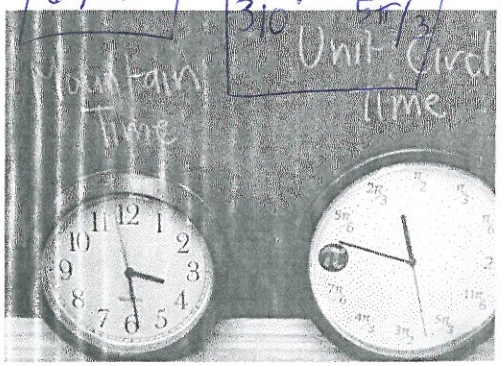
22. Sin $\theta = \frac{\sqrt{2}}{2}$ $\frac{\pi}{4}$ or 45° $\frac{3\pi}{4}$ or 135°

23. Cos $\theta = \frac{-\sqrt{3}}{2}$ $\frac{5\pi}{6}$ / 150° $\frac{7\pi}{6}$ / 210°

24. Tan $\theta = -\sqrt{3}$ 120° or $2\pi/3$ 300° or $5\pi/3$

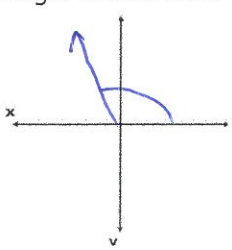
25. Tan $\theta = -1$ 135° or $\frac{3\pi}{4}$ 315° or $\frac{7\pi}{4}$

26. Sin $\theta = \frac{-1}{2}$ 330° or $\frac{11\pi}{6}$ 210 or $\frac{7\pi}{6}$



27. Sketch the angle in **standard position**.

a. 2 radians



b. -3 radians