College Algebra

Name: _____

5.1 Practice

Period: _____ Date: _____

Which is larger, one degree or one radian? Explain.

_____

_____

Convert each degree measure to radians and each radian measure to degrees.

1. $120°$

$\frac{120^\circ}{1} \cdot \frac{\pi}{180^\circ} = \frac{120^\circ \pi}{180^\circ}$

$= \boxed{2\pi/3}$

2. $\frac{7\pi}{2}$

$\frac{7\pi}{2} \cdot \frac{180}{\pi} = \boxed{630^\circ}$

3. $-90°$

$\frac{-90^\circ}{1} \cdot \frac{\pi}{180^\circ} = \boxed{\frac{-\pi}{2}}$

4. π

$\frac{\pi}{1} \cdot \frac{180^\circ}{\pi} = \boxed{180^\circ}$

5. $215°$

$\frac{215^\circ}{1} \cdot \frac{\pi}{180^\circ} = \boxed{\frac{43\pi}{36}}$

6. $\frac{2\pi}{9}$

$\frac{2\pi}{9} \cdot \frac{180^\circ}{\pi} = \boxed{40^\circ}$

7. $\frac{5\pi}{6}$

$\frac{5\pi}{6} \cdot \frac{180^\circ}{\pi} = \boxed{150^\circ}$

8. $315°$

$\frac{315^\circ}{1} \cdot \frac{\pi}{180^\circ} = \boxed{\frac{7\pi}{4}}$

9. -0.25

$-.25 \cdot \frac{180^\circ}{\pi} = \boxed{-14.32^\circ}$

10. 2.75

$\frac{2.75}{1} \cdot \frac{180^\circ}{\pi} = \boxed{157.56^\circ}$

11. $-300°$

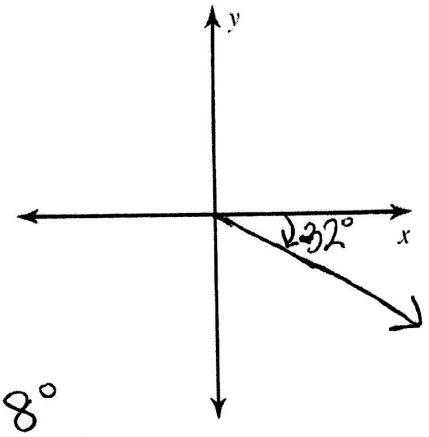
$\frac{-300^\circ}{1} \cdot \frac{\pi}{180^\circ} = \boxed{\frac{-5\pi}{3}}$

12. $\frac{4\pi}{5}$

$\frac{4\pi}{5} \cdot \frac{180^\circ}{\pi} = \boxed{144^\circ}$

Sketch the angle in standard position. Don't forget to draw an arrow for the direction. Then state one positive and one negative angle that are co-terminal to the angle given.

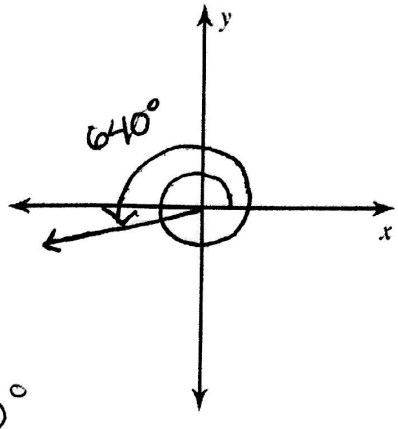
13. $-32°$



Positive: 328°

Negative: -392°

14. $640°$



Positive: 280°

Negative: -80°

Find the smallest positive co-terminal angle for each angle.

15. $-38°$

322°

16. $699°$

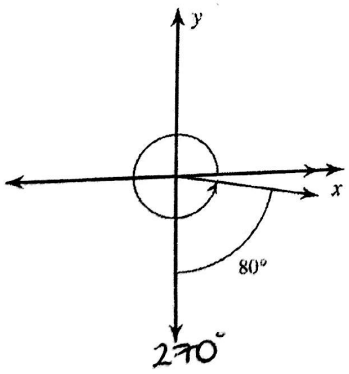
339°

17. $-215°$

145°

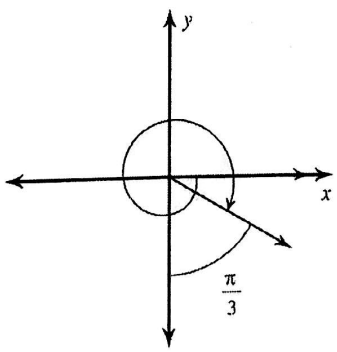
Find the measure of each angle.

18.



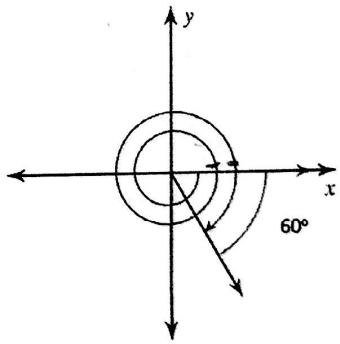
350°

19.



$\frac{-13\pi}{6}$ OR: -6.81

20.



780°