Worksheet 13 - Angles (§6.1)

In Exercises 1 - 20, graph the oriented angle in standard position. Classify each angle according to where its terminal side lies and then give two coterminal angles, one of which is positive and the other negative.

1. 330°
2. -135°
3. 120°
4. 405°
5. -270°
6. $\frac{5\pi}{6}$
7. $-\frac{11\pi}{3}$
8. $\frac{5\pi}{4}$
9. $\frac{3\pi}{4}$
10. $-\frac{\pi}{3}$
11. $\frac{7\pi}{2}$
12. $\frac{\pi}{4}$
13. $-\frac{\pi}{2}$
14. $\frac{7\pi}{6}$
15. $-\frac{5\pi}{3}$
16. 3π
17. -2π
18. $-\frac{\pi}{4}$
19. $\frac{15\pi}{4}$
20. $-\frac{13\pi}{6}$

In Exercises 21 - 28, convert the angle from degree measure into radian measure, giving the exact value in terms of π.

21. 0°
22. 240°
23. 135°
24. -270°
25. -315°
26. 150°
27. 45°
28. -225°

In Exercises 29 - 36, convert the angle from radian measure into degree measure.

29. π
30. $-\frac{2\pi}{3}$
31. $\frac{7\pi}{6}$
32. $\frac{11\pi}{6}$
33. $\frac{\pi}{3}$
34. $\frac{5\pi}{3}$
35. $-\frac{\pi}{6}$
36. $\frac{\pi}{2}$

In Exercises 37 - 41, sketch the oriented arc on the Unit Circle which corresponds to the given real number.

37. $\theta = \frac{5\pi}{6}$
38. $\theta = -\pi$
39. $\theta = 6$
40. $\theta = -2$
41. $\theta = 12$