1. $x = \pi k$

3. $x = \dfrac{3\pi}{4} + \pi k$

5. $x = \dfrac{5\pi}{6} + 2\pi k$ or $x = \dfrac{7\pi}{6} + 2\pi k$

7. $x = 30° + 360°k$ or $x = 150° + 360°k$

9. $\alpha = 60° + 360°k$ or $\alpha = 120° + 360°k$

11. $\{29.2°, \ 330.8°\}$

13. $\{79.5°, \ 259.5°\}$

15. $\{2.75, 5.90\}$

17. $x = \dfrac{2\pi}{3} + 4\pi k$ or $x = \dfrac{10\pi}{3} + 4\pi k$

19. $x = \dfrac{\pi}{3} + 4\pi k$ or $x = \dfrac{5\pi}{3} + 4\pi k$

21. $x = \dfrac{\pi}{6} + \dfrac{\pi}{2}k$

23. $\{60°, \ 240°, \ 120°, \ 300°\}$

25. $\{15°, \ 75°, \ 135°, \ 195°, \ 255°, \ 315°\}$

27. $\left\{\dfrac{\pi}{8}, \ \dfrac{9\pi}{8}, \ \dfrac{7\pi}{8}, \ \dfrac{15\pi}{8}\right\}$

29. $\alpha = 6.6° + 120°k$ or $\alpha = 53.4° + 120°k$

31. 12.5° and 77.5°. The smaller angle is 6.3 seconds faster.