

Unit 6 test review answers

1. $43^\circ, 497^\circ$ or -223°

2. $20^\circ, 200^\circ$

3. $\frac{\pi}{4}, \frac{7\pi}{4}$

4. $\frac{\pi}{3}, \frac{13\pi}{3}$ or $-\frac{5\pi}{3}$

5. $\frac{9\pi}{4}$

6. 165°

7. $\frac{11\pi}{2} \approx 17.3$ km

8. $\frac{35\pi}{2} \approx 55.0$ mi

9. $\frac{81\pi}{8} \approx 31.8$ sq. cm.

10. $\sin \theta = -\frac{7\sqrt{193}}{193}$, $\cos \theta = \frac{12\sqrt{193}}{193}$, $\tan \theta = -\frac{7}{12}$

$$\csc \theta = -\frac{\sqrt{193}}{7}, \sec \theta = \frac{\sqrt{193}}{12}, \cot \theta = -\frac{12}{7}$$

11. $(24, 7), (-24, 7), 16.3^\circ, 163.7^\circ$

12. $(8, 5), (-8, -5), 32.0^\circ, 212.0^\circ$

13. $(-1, 2\sqrt{2}), (-1, -2\sqrt{2}), 109.5^\circ, 250.5^\circ$

14. $(\sqrt{133}, -6), (-\sqrt{133}, -6), 332.5^\circ, 207.5^\circ$

15. $x = 3\sqrt{2}, y = 3$

16. $x = 5\sqrt{3}, y = 10$

17. $x = 8, y = 8\sqrt{3}$

18. $x = 2\sqrt{2}, y = 4$

19. $45^\circ = \frac{\pi}{4}$ and $315^\circ = \frac{7\pi}{4}$

20. $45^\circ = \frac{\pi}{4}$ and $225^\circ = \frac{5\pi}{4}$

21. $240^\circ = \frac{4\pi}{3}$ and $300^\circ = \frac{5\pi}{3}$

22. $150^\circ = \frac{5\pi}{6}$ and $330^\circ = \frac{11\pi}{6}$