

SM3H unit 6 test review answers

1. $\frac{4\pi}{15}$

2. $-\frac{7\pi}{10}$

3. $\frac{2\pi}{15}$

4. 390°

5. -450°

6. 137.5°

7. 45.38 cm

8. 10.24 in

9. 161.61 square feet

10. 6.4 square meters

11. $455^\circ, -265^\circ$

12. $115^\circ, -605^\circ$

13. $\frac{7\pi}{6}, -\frac{17\pi}{6}$

14. $\frac{23\pi}{4}, \frac{7\pi}{4}, -\frac{\pi}{4}$

15. 3016 feet per minute

16. $\sin \alpha = \frac{5\sqrt{74}}{74}$ $\cos \alpha = -\frac{7\sqrt{74}}{74}$

$\tan \alpha = -\frac{5}{7}$ $\sec \alpha = -\frac{\sqrt{74}}{7}$

$\csc \alpha = \frac{\sqrt{74}}{5}$ $\cot \alpha = -\frac{7}{5}$

17. $\sin \alpha = -\frac{3\sqrt{13}}{13}$ $\cos \alpha = \frac{2\sqrt{13}}{13}$

$\tan \alpha = -\frac{3}{2}$ $\sec \alpha = \frac{\sqrt{13}}{2}$

$\csc \alpha = -\frac{\sqrt{13}}{3}$ $\cot \alpha = -\frac{2}{3}$

18. 82.8°

19. 35.3°

20. 17.5°

21. $\theta \approx 21.7^\circ$

22. $\theta \approx 15.2^\circ$

23. $\theta \approx 29.8^\circ$

24. $b \approx 15.2, \angle A \approx 40.5^\circ, \angle B \approx 49.5^\circ$

25. $a \approx 13.5, b \approx 6.6, \angle A \approx 64^\circ$

26. ≈ 5.6

27. $\approx 38.0^\circ$

28. ≈ 175 feet

29. $\alpha = 345.9^\circ, 194.1^\circ$

30. $\alpha = 99.1^\circ, 260.9^\circ$

31. $\alpha = 293.4^\circ, 113.4^\circ$

32. 0

33. 0

34. $\sqrt{3}$

35. $\sqrt{2}$

36. $\frac{2\sqrt{3}}{3}$

37. 0

38. $-\frac{\sqrt{3}}{2}$

39. $-\frac{1}{2}$

40. -1

41. $-\frac{2\sqrt{3}}{3}$

42. -2

43. $-\sqrt{3}$

44. 45°

45. 0°

46. 0°

47. 60°

48. 30°

49. 90°

50. 45°

51. $30^\circ, \frac{\pi}{6}$

52. $60^\circ, \frac{\pi}{3}$

53. $45^\circ, \frac{\pi}{4}$

54. $90^\circ, \frac{\pi}{2}$

55. $-\frac{5}{4}$

56. $-\frac{24}{7}$

57. $-\frac{\pi}{6}$

58. $-\frac{\pi}{4}$

59. $\frac{\pi}{4}$

60. $\frac{\sqrt{3}}{2}$

61. 1

62. $-\frac{\pi}{4}$

63. $\frac{\pi}{4}$

64. $\frac{\pi}{6}$

65. $\frac{\pi}{6}$

66. 90°

67. 135°

68. 30°

69. 90°

70. $x = \pi$

71. $x = 210^\circ, 330^\circ$

72. $x = \frac{\pi}{6} + 2\pi k, x = \frac{5\pi}{6} + 2\pi k$

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

74. $x = 45^\circ + 360^\circ k, x = 315^\circ + 360^\circ k$

75. $x = 30^\circ + 180^\circ k$