

Answer Key

Testname: CH 5 PRACTICE TEST

- 1) $\sin \theta$
- 2) 1
- 3) $2 \sec x$
- 4) $\sec x$
- 5) $-\sin x$
- 6) $\frac{1 + \csc x}{\sec x} = \cos x \left(1 + \frac{1}{\sin x} \right) = \frac{\cos x (\sin x + 1)}{\sin x} = \frac{\cos x \sin x}{\sin x} + \frac{\cos x}{\sin x} = \cos x + \cot x.$
- 7) $\cos^2 x - \sin^2 x = \cos^2 x + (\sin^2 x - \sin^2 x) - \sin^2 x = (\cos^2 x + \sin^2 x) - \sin^2 x - \sin^2 x = 1 - 2 \sin^2 x.$
- 8) $\frac{-\sqrt{6} + \sqrt{2}}{4}$
- 9) $2 - \sqrt{3}$
- 10) $\frac{\sqrt{6} + \sqrt{2}}{4}$
- 11) $\tan \left(\frac{18\pi}{77} \right)$
- 12) $\tan 56^\circ$
- 13) $\cos 4u = \cos (2u + 2u) = \cos^2 2u - \sin^2 2u.$
- 14) $\cos x (2 \sin x - 1)$
- 15) $0, \frac{\pi}{3}, \frac{2\pi}{3}, \pi, \frac{4\pi}{3}, \frac{5\pi}{3}$
- 16) $C = 63^\circ, b \approx 5.6, c \approx 5.6$
- 17) $B = 58^\circ, a \approx 2.8, b \approx 6.9$
- 18) 120.49 cm^2
- 19) 3.91 in.^2
- 20) 14,859.26
- 21) $a \approx 34.6, B \approx 33^\circ, C \approx 66^\circ$
- 22) No triangles possible