

4.1-4.3 Test Review - Calculator Active

Convert each decimal degree measure into degrees-minutes-seconds.

1) 229.51°

2) 181.31°

Convert each degrees-minutes-seconds into decimal degrees.

3) $146^\circ 26' 24''$

4) $218^\circ 6' 45''$

Convert each degree measure into radians.

5) 540°

6) 510°

Convert each radian measure into degrees.

7) $\frac{17\pi}{9}$

8) $\frac{47\pi}{18}$

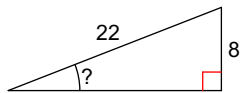
Find the length of each arc.

9) $r = 16$ m, $\theta = 225^\circ$

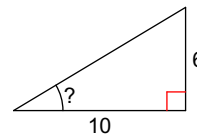
10) $r = 8$ yd, $\theta = 45^\circ$

Find the measure of the indicated angle (in degrees).

11)

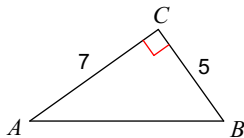


12)

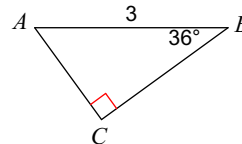


Solve each triangle.

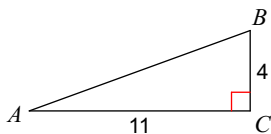
13)



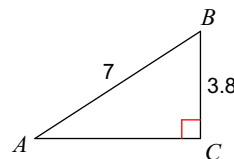
14)



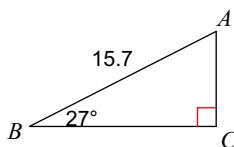
15)



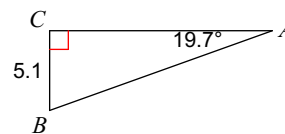
16)



17)



18)



In each problem, angle C is a right angle. Solve each triangle.

19) $c = 8$, $a = 6$

20) $m\angle A = 53^\circ$, $c = 13$

21) $a = 10.4$, $m\angle A = 41^\circ$

22) $c = 9$, $m\angle A = 58^\circ$

Answer each question.

23) From a point 340 feet away from the base of a building, the angle of elevation to the top of the building is 65° . Find the height of the building.

24) The sun is 20° above the horizon. Find the length of a shadow cast by a building that is 600 feet tall.

4.1-4.3 Test Review - No Calculator

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Find the value of all six trig functions when

25) $\csc \theta = \frac{5}{3}$

26) $\sec \theta = \frac{4}{3}$

27) $\cot \theta = \frac{7}{24}$

28) $\cos \theta = \frac{\sqrt{21}}{5}$

29) $\sin \theta = \frac{3\sqrt{10}}{10}$

30) $\tan \theta = \frac{\sqrt{15}}{7}$

Use the given point on the terminal side of angle θ to find the value of all of the trigonometric functions.

31) $(5, -1)$

32) $(2, 7)$

33) $(-6, -3)$

34) $(-2, 4)$

Find the values of the six trigonometric functions of θ if:

35) $\tan \theta = -2$ and $\sin \theta < 0$

36) $\sin \theta = -\frac{2}{5}$ and $\cos \theta > 0$

37) $\sin \theta = \frac{2}{3}$ and $\cos \theta > 0$

38) $\cot \theta = -\frac{2}{3}$ and $\sin \theta < 0$

Find two angles (one positive and one negative) that are coterminal with the given angle, θ .

39) $\theta = 125^\circ$

40) $\theta = -\frac{4\pi}{5}$

Find the exact value of each trigonometric function.

41) $\tan 270^\circ$

42) $\tan 135^\circ$

43) $\tan 330^\circ$

44) $\tan 120^\circ$

45) $\cot 150^\circ$

46) $\csc 300^\circ$

47) $\sin \frac{\pi}{4}$

48) $\sin \frac{\pi}{6}$

49) $\cos \frac{5\pi}{4}$

50) $\cos \frac{11\pi}{6}$

51) $\cot \frac{5\pi}{6}$

52) $\sec \frac{5\pi}{6}$

53) $\sin -90^\circ$

54) $\sin -210^\circ$

55) $\tan -450^\circ$

56) $\cos 675^\circ$

57) $\sin -\frac{7\pi}{2}$

58) $\tan -\frac{5\pi}{3}$

59) $\cos \frac{17\pi}{4}$

60) $\tan \frac{16\pi}{3}$