

Ch 13 Review B

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

1) $\sec \theta; (-3, -4)$

2) $\cos \theta; (2, -2\sqrt{3})$

Find the reference angle.

3) 240°

4) -710°

5) $-\frac{67\pi}{18}$

6) $-\frac{8\pi}{9}$

Solve each triangle. Round your answers to the nearest hundredth.

7) $m\angle C = 22^\circ, b = 19, c = 14$

8) $b = 27.5, a = 22.6, c = 9.1$

Find the length of each arc.

9) $r = 5 \text{ mi}, \theta = 30^\circ$

10) $r = 17 \text{ yd}, \theta = \frac{3\pi}{4}$

Find the area of each sector.

11) $r = 11 \text{ yd}, \theta = 45^\circ$

12) $r = 12 \text{ cm}, \theta = \frac{5\pi}{6}$

Find a positive and a negative coterminal angle for each given angle.

13) -410°

14) 554°

Find each angle measure to the nearest degree where $0 < x < 360$

15) $\cos B = -0.1392$

16) $\sin C = 0.7314$

17) $\sin X = -0.6157$

18) $\tan Z = -11.4301$

State the number of possible triangles that can be formed using the given measurements.

19) $m\angle A = 34^\circ$, $c = 34$ yd, $a = 25$ yd

20) $m\angle A = 59^\circ$, $c = 33$ km, $a = 25$ km

21) $m\angle C = 105^\circ$, $b = 29$ km, $c = 33$ km

Find the area of each triangle to the nearest tenth.

22) In $\triangle KHP$, $h = 11$, $m\angle K = 105^\circ$, $p = 10$

23) $a = 7$, $m\angle B = 17^\circ$, $m\angle A = 148^\circ$

24) $b = 7.8$, $m\angle C = 128^\circ$, $c = 12$

25) In $\triangle RPQ$, $p = 13$ yd, $q = 15$ yd, $r = 5$ yd

26) An object is at (12,2) at time $t = 3$ and then at (15,28) at time $t = 6$. Write the parametric equations describing the linear motion.

27) At a watermelon seed-spitting contest, a seed is launched with an initial velocity of 20ft/sec at an angle of 40 degrees and from an initial height of 6ft. How far did the seed travel?

Answers to Ch 13 Review B (ID: 1)

1) $-\frac{5}{3}$

2) $\frac{1}{2}$

3) 60°

4) 10°

5) $\frac{5\pi}{18}$

6) $\frac{\pi}{9}$

7) $m\angle A = 127.4^\circ, m\angle B = 30.6^\circ, a = 29.7$
Or $m\angle A = 8.6^\circ, m\angle B = 149.4^\circ, a = 5.6$

8) $m\angle B = 113.3^\circ, m\angle C = 17.7^\circ, m\angle A = 49^\circ$

9) $\frac{5\pi}{6}$ mi

10) $\frac{51\pi}{4}$ yd

11) $\frac{121\pi}{8}$ yd²

12) 60π cm²

13) 310° and -50°

14) 194° and -166°

15) $98^\circ; 262^\circ$

16) 47° and 133°

17) 218° and 322°

18) 95° and 275°

19) Two triangles

20) None

21) One triangle

22) 53.1 units²

23) 3.5 units²

24) 16.9 units²

25) 31.6 yd²

26) $x = t + 12; y = 8.7t + 2$

27) 15.2 ft