

Name: _____

MTH129 HW#11 Due Tues 12/11

Show all work - place final answers in the space provided.

1. Find the radian measures of the angles with the given degree measures. *Round to the 3rd decimal place*

(a) 2160° _____ rad

(b) 150° _____ rad

2. Find the degree measure of the angle with the given radian measure.

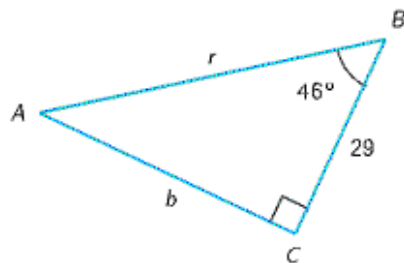
(a) $\frac{5\pi}{18}$ _____ $^\circ$

(b) $\frac{13\pi}{12}$ _____ $^\circ$

3. A central angle θ in a circle of radius 5 m is subtended by an arc of length 9 m. Find the measure of θ in degrees and in radians. *Round to the first decimal place.*

_____ rad _____ $^\circ$

4. Solve the right triangle.

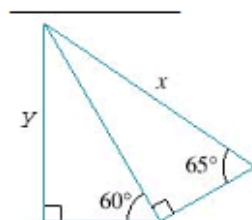


(a) Find b . *Round to the 2nd decimal place.* _____

(b) Find r . *Round to the 2nd decimal place.* _____

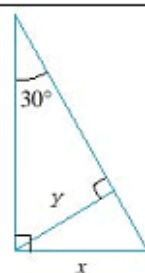
(c) Find $\angle A$. $\angle A =$ _____ $^\circ$

- 5. Find x correct to one decimal place.



$$y = 60$$

- 6. Find x correct to one decimal place.



$$y = 25$$

- 7. A man is lying on the beach, flying a kite. He holds the end of the kite string at ground level, and estimates the angle of elevation of the kite to be 55° . If the string is 470 ft long, how high is the kite above the ground?



- Let the angles of a triangle be α , β and γ , with opposite sides of length a , b , and c , respectively. Use the Law of Cosines to find the remaining side and the other angles.

$$\alpha = 65^\circ, b = 52, c = 34$$

Please round the answer to the nearest tenth.

$$a \approx \underline{\hspace{2cm}}$$

$$\beta \approx \underline{\hspace{2cm}}^\circ$$

$$\gamma \approx \underline{\hspace{2cm}}^\circ$$



9. Let the angles of a triangle be α, β and γ , with opposite sides of length a, b , and c , respectively. Use the Law of Sines to find the remaining sides.

$$\alpha = 62^\circ, \gamma = 45^\circ, b = 13$$

Please round the answer to the nearest tenth.

$$\beta \approx \underline{\hspace{2cm}}^\circ$$

$$a \approx \underline{\hspace{2cm}}$$

$$c \approx \underline{\hspace{2cm}}$$



10. The area of a sector of a circle with angle 45° is 18 square feet. Find the radius of the circle.