

Chapter 9 Review A Assignment # _____

Do your work on a separate piece of paper.

For problems #1 – 5, find angles to the nearest tenth of a degree and sides rounded to 3 significant digits.

1. $A = 17^\circ$, $B = 120^\circ$, $a = 6$; find c .
2. $a = 94$, $b = 73$, $c = 52$. Find B .
3. $C = 105^\circ$, $a = 12$, $c = 9$, find A .
4. $B = 35^\circ$, $a = 11$, $b = 7$, find A
5. $A = 32^\circ$, $b = 10$, $c = 15$, find B

#6 – 9 You must use right angle trig (SOH-CAH-TOA)

6. In $\triangle ABC$, $\angle A = 27^\circ$; $\angle B = 90^\circ$; $a = 12$. Find b to the nearest tenth.
7. In $\triangle ABC$, $\angle B = 90^\circ$; $b = 13$; $a = 11$. Find $\angle C$ to the nearest tenth degree.
8. In $\triangle ABC$, $\angle B = 90^\circ$; $\angle A = 40^\circ$, $c = 21$. Find a to the nearest tenth.
9. Given $\triangle ABC$ with $m\angle A = 36^\circ$, $b = 15$ & $a = 7$. Solve the triangle and find the area.

10. Given $\triangle ABC$ with $m\angle A = 36^\circ$, $b = 15$ & $a = 10$. Solve the triangle and find the area
11. The area of $\triangle ABC$ is 48cm^2 . Find measure(S) $\angle C$ if $a = 9\text{cm}$ and $b = 12\text{cm}$

12. The bearing from A to B is 220° , find the bearing from B to A.

13. Find the area and perimeter of a regular pentagon inscribed in a circle with radius 10 cm.

14. Find the area and perimeter of a regular hexagon inscribed in a circle with radius 10 cm.

15. The angle of elevation of the summit of a mountain from the bottom of a ski lift is 33° . A skier rides 1000 ft on this ski lift to get to the summit. Find the vertical distance between the bottom of the ski lift and the summit.

16. From the top of a building 10 m tall, the angle of elevation to the top of a flagpole is 11° . At the base of the building, the angle of the elevation to the top of the flagpole is 39° . Find the height of the flagpole.

17. A 6 ft man finds the angle of elevation to the top of a building to be 50° . Standing on a 5 ft ladder from the same spot, he finds the angle of elevation to the top of this building to be 30° . Find the height of the building to the nearest tenth.

18. The angle of elevation to the top of a tree is 17° . After moving 65 ft closer to the tree, the angle of elevation to the top of the tree is 35° . Find the height of the tree.

19. Ship A leaves port at 20 knots (nautical miles per hour) bearing 40° . At the same time, ship B leaves port at 15 knots bearing 280° . After 3 hours, how far apart are the ships to the nearest tenth?

20. Starting at the intersection of “walk and don’t walk”, proceed at a bearing of $S31^\circ E$ for 130 ft, then proceed at a bearing of $N7^\circ E$ for 70ft, and then return back to the starting point. Draw the plot of land and find the area.

1. $c = 14.0$
2. $B = 50.6^\circ$
3. impossible, no triangle
4. $A_1 = 64.3^\circ$; or $A_2 = 115.7^\circ$
5. $B = 39.1^\circ$
6. 26.4
7. 32.2°
8. 17.6
9. Not possible

$$m\angle B_1 = 61.845^\circ, m\angle C_1 = 82.155^\circ, c_1 = 16.854$$

10. $K_1 = 74.3 \text{ sq. units}$
 $m\angle B_2 = 118.155^\circ, m\angle C_2 = 25.845^\circ, c_2 = 7.417$
 $K_1 = 32.7 \text{ sq. units}$

11. 62.7° or 117.3°
12. 040°
13. 237.76 cm^2 ; 59.0 cm
14. $150\sqrt{3}$ or 259.8 cm^2 ; 60 cm
15. 545 ft
16. 13.2 m
17. 15.7 ft
18. 35.3 ft
19. 91.2 nautical miles
20. 2801.260 sq ft