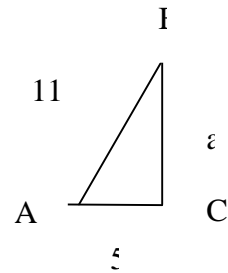


Honors Worksheet #1
Chapter 5

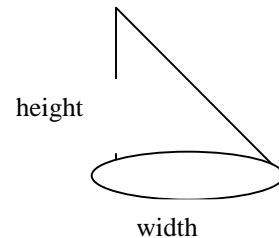
1. Change 225.639° to degrees, minutes, and seconds.
2. Write $23^\circ 16' 25''$ as a decimal to the nearest thousandth of a degree.
3. State the angle measure represented by 2.4 rotations clockwise.
4. Identify all coterminal angles between -360° and 360° for the angle 540° .
5. Find the measure of the reference angle for 562° .

For Exercises 6-8, refer to the figure.



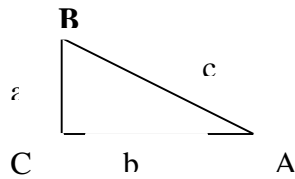
6. Find the value of the sine for $\angle A$.
7. Find the value of the cotangent for $\angle A$.
8. Find the value of the secant for $\angle A$.
9. If $\csc \theta = 2$, find $\sin \theta$.
10. Find $\sin (270^\circ)$.
11. Find the exact value of $\cot 330^\circ$.
12. Find the exact value of $\sec \theta$ for angle θ in standard position if the point at $(3, 2)$ lies on its terminal side.
13. Suppose θ is an angle in standard position whose terminal side lies in Quadrant IV. If $\cos \theta = 12/13$, find the value of $\csc \theta$.

For the Exercises 14 and 15, refer to the figure. The angle of elevation from the far side of the pool to the top of the waterfall is 75° , and the distance is 185 feet.



14. Find the height of the waterfall to the nearest foot.
15. Find the width across the pool to the nearest foot.
16. If $0^\circ < x < 360^\circ$, solve $\cot x = \sqrt{3}$.
17. Assuming an angle in Quadrant I, evaluate $\sec (\tan^{-1} \frac{3}{4})$.

18. Given triangle at the right find B to the nearest tenth of a degree of $a=8$ and $b=20$.



For Exercises 19 and 20, round answers to the nearest tenth.

19. In $\triangle ABC$, $A=47^\circ 15'$, $B=58^\circ 33'$, and $c=23$. Find a .

20. If $A=37.2^\circ$, $B=17.9^\circ$, and $a=22.3$, find the area of $\triangle ABC$.

21. Determine the number of possible solutions if $A=47^\circ$, $a=5$, and $b=4$

22. Determine the least possible value for c if $A=30^\circ$, $a=5$ and $b=8$

For Exercises 23-25, round answers to the nearest tenth.

23. In $\triangle ABC$, $A=118^\circ$, $b=8$, and $c=6$. Find a .

24. In $\triangle ABC$, $a=9$, $b=5$, and $c=12$. Find B .

25. If $a=12$, $b=24$, and $c=30$, find the area of $\triangle ABC$.