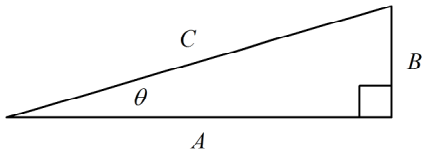
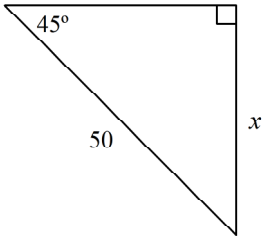
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Algebra II Practice Quiz 13.1 - 13.2

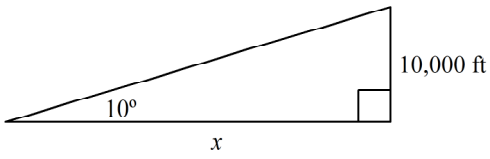
1. (10 points) Find the value of the sine, cosine, and tangent functions for θ where $A = 96$, $B = 28$, and $C = 100$.



2. (10 points) Use a trigonometric function to find the value of x.

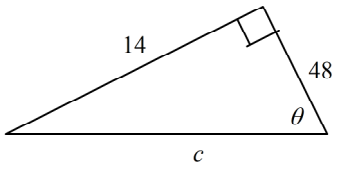


3. (10 points) After takeoff from an airport, an airplane's angle of ascent is 10°. The airplane climbs to an altitude of 10,000 feet. At that point, what is the land distance between the airplane and the airport? Round your answer to the nearest foot.



4. (10 points) A surveyor whose eye level is 5 feet above the ground determines the angle of elevation to the top of an office building to be 41.7°. If the surveyor is standing 40 feet from the base of the building, what is the height of the building to the nearest foot?

5. (10 points) Find the values of the six trigonometric functions for θ.



6. (10 points) Draw an angle with 515° in standard position.

7. (10 points) Find the measures of a positive angle and a negative angle that are coterminal with −258°.

8. (10 points) Find the measure of the reference angle for $\theta = 142°$.

9. (10 points) $P(-7,-2)$ is a point on the terminal side of θ in standard position. Find the exact value of the six trigonometric functions for θ.

10. (10 points) Write an expression that can be used to determine all of the coterminal angles of an angle that measures 170°.

Algebra II Practice Quiz 13.1 - 13.2
Answer Section

SHORT ANSWER

1. ANS:
$\sin\theta = \frac{7}{25}$; $\cos\theta = \frac{24}{25}$; $\tan\theta = \frac{7}{24}$

PTS: 10 REF: Page 929

2. ANS:
$x = 25\sqrt{2}$

PTS: 10 REF: Page 930

3. ANS:
56,713 ft

PTS: 10 REF: Page 930

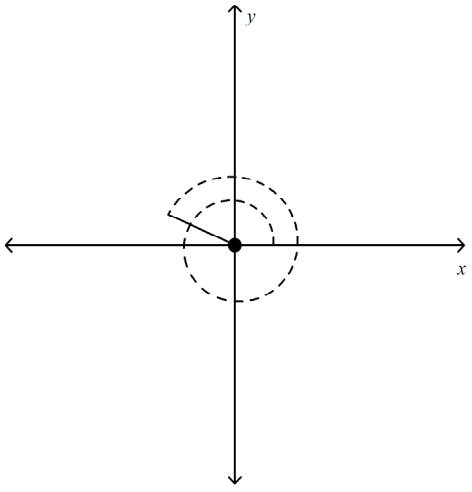
4. ANS:
41 ft

PTS: 10 REF: Page 931

5. ANS:
$\sin\theta = \frac{7}{25}$; $\cos\theta = \frac{24}{25}$;
$\tan\theta = \frac{7}{24}$; $\csc\theta = \frac{25}{7}$;
$\sec\theta = \frac{25}{24}$; $\cot\theta = \frac{24}{7}$

PTS: 10 REF: Page 932

6. ANS:



PTS: 10 REF: Page 936

7. ANS:
102° and −618°

PTS: 10 REF: Page 937

8. ANS:
38°

PTS: 10 REF: Page 937

9. ANS:
$\sin\theta = -\frac{2\sqrt{53}}{53}$; $\csc\theta = -\frac{\sqrt{53}}{2}$;
$\cos\theta = -\frac{7\sqrt{53}}{53}$; $\sec\theta = -\frac{\sqrt{53}}{7}$;
$\tan\theta = \frac{2}{7}$; $\cot\theta = \frac{7}{2}$

PTS: 10 REF: Page 938

10. ANS:
$170° + (360°)n$, where n is an integer

PTS: 10