3.3B Sine and Cosine Function Values

AP Precalculus Name: _____ **CA #2**

For each problem, an angle in standard position in the xy-plane is given in radians. A circle is centered at the origin with the given radius. What are the coordinates of the point of intersection of the terminal ray of the angle and the circle?

1. $\theta = \frac{\pi}{4}, r = 17$

2. $\theta = \frac{5\pi}{6}, r = 24$

3. $\theta = \frac{7\pi}{6}, r = 6$

4. $\theta = \frac{3\pi}{4}, r = 2$

5. $\theta = \frac{\pi}{2}, r = 9$

6. $\theta = \frac{5\pi}{3}, r = 10$

In the xy-plane, the terminal ray of angle θ in standard position intersects a circle of radius r at the given point. What are the values of θ and r?

7. $\left(-\frac{5}{2}, -\frac{5\sqrt{3}}{2}\right)$

8. $\left(6\sqrt{3}, -6\right)$

9. $\left(-2, 2\sqrt{3}\right)$

10. $\left(-8\sqrt{2}, -8\sqrt{2}\right)$

Answers to 3.3B CA #2

1. $\left(\frac{17\sqrt{2}}{2}, \frac{17\sqrt{2}}{2}\right)$	2. $(-12\sqrt{3}, 12)$	3. $(-3\sqrt{3}, -3)$	4. $(-\sqrt{2}, \sqrt{2})$	5. $(0, 9)$
6. $(5, -5\sqrt{3})$	7. $\theta = \frac{4\pi}{3}, r = 5$	8. $\theta = \frac{11\pi}{6}, r = 12$	9. $\theta = \frac{2\pi}{3}, r = 4$	10. $\theta = \frac{5\pi}{4}, r = 16$