Algebra II/Trig B Name _____

Finding Trigonometric Functions Of Any Angle #2
Module 3, Unit 6, Lesson 5
Homework

In #1-3, a point on the terminal side of angle $\theta$ is given. Find the exact value of each of the six trigonometric functions of $\theta$.

1. (–4, 3)

2. (2, 3)

3. (5, –5)

In #4-6, let $\theta$ be an angle in standard position. Name the quadrant in which $\theta$ lies.

4. $\sin\theta > 0$, $\cos\theta > 0$

5. $\sin\theta > 0$, $\cos\theta < 0$

6. $\tan\theta < 0$, $\cos\theta > 0$

In #7-10, find the exact value of each of the remaining trigonometric functions of $\theta$.

7. $\cos\theta = -\frac{3}{5}$, $\theta$ in quadrant III

8. $\tan\theta = -\frac{2}{3}$, $\sin\theta > 0$

9. $\tan\theta = \frac{4}{3}$, $\cos\theta < 0$

10. $\sec\theta = -3$, $\tan\theta > 0$

In 11-23, find the exact value of each trigonometric function. Draw and label your work.

11. $\cos 225^\circ$

12. $\tan 405^\circ$

13. $\cot\frac{\pi}{2}$

14. $\sec 510^\circ$

15. $\sin(-225^\circ)$

16. $\cot\frac{13\pi}{3}$

17. $\csc\frac{7\pi}{6}$

18. $\sec\pi$

19. $\cos\frac{23\pi}{4}$

20. $\cot\left(-240^\circ\right)$

21. $\csc\frac{3\pi}{2}$

22. $\tan\left(-\frac{11\pi}{4}\right)$

1. $\sin\theta = \frac{3}{5}$ $\csc\theta = \frac{5}{3}$
$\cos\theta = \frac{-4}{5}$ $\sec\theta = \frac{-5}{4}$
$\tan\theta = \frac{-3}{4}$ $\cot\theta = \frac{-4}{3}$

2. $\sin\theta = \frac{3\sqrt{13}}{13}$ $\csc\theta = \frac{\sqrt{13}}{3}$
$\cos\theta = \frac{2\sqrt{13}}{13}$ $\sec\theta = \frac{\sqrt{13}}{2}$
$\tan\theta = \frac{3}{2}$ $\cot\theta = \frac{2}{3}$

3. $\sin\theta = \frac{-\sqrt{2}}{2}$ $\csc\theta = -\sqrt{2}$
$\cos\theta = \frac{\sqrt{2}}{2}$ $\sec\theta = \sqrt{2}$
$\tan\theta = -1$ $\cot\theta = -1$

4. I 5. II 6. IV

7. $\sin\theta = \frac{-4}{5}$ $\csc\theta = \frac{-5}{4}$
$\sec\theta = -\frac{5}{3}$
$\tan\theta = \frac{4}{3}$ $\cot\theta = \frac{3}{4}$

8. $\sin\theta = \frac{2\sqrt{13}}{13}$ $\csc\theta = \frac{\sqrt{13}}{2}$
$\cos\theta = -\frac{3\sqrt{13}}{13}$ $\sec\theta = -\frac{\sqrt{13}}{3}$
$\cot\theta = -\frac{3}{2}$

9. $\sin\theta = \frac{-4}{5}$ $\csc\theta = \frac{-5}{4}$
$\cos\theta = -\frac{3}{5}$ $\sec\theta = -\frac{5}{3}$
$\cot\theta = \frac{3}{4}$

10. $\sin\theta = -\frac{2\sqrt{2}}{3}$ $\csc\theta = -\frac{3\sqrt{2}}{4}$
$\cos\theta = -\frac{1}{3}$
$\tan\theta = 2\sqrt{2}$ $\cot\theta = \frac{\sqrt{2}}{4}$

11. $-\frac{\sqrt{2}}{2}$ 12. 1 13. 0 14. $-\frac{2\sqrt{3}}{3}$

15. $\frac{\sqrt{2}}{2}$ 16. $\frac{\sqrt{3}}{3}$ 17. – 2 18. – 1

19. $\frac{\sqrt{2}}{2}$ 20. $-\frac{\sqrt{3}}{3}$ 21. – 1 22. 1