Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2CP Unit Circle Practice**

1. Complete the chart with the exact values of the six trig functions for the given angle measurements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Radian | Degree | sin θ | cos θ | tan θ |
|  | 0° |  |  |  |
|  | 30° |  |  |  |
|  | 45° |  |  |  |
|  | 60° |  |  |  |
|  | 90° |  |  |  |
|  | 120° |  |  |  |
|  | 135° |  |  |  |
|  | 150° |  |  |  |
|  | 180° |  |  |  |
|  | 210° |  |  |  |
|  | 225° |  |  |  |
|  | 240° |  |  |  |
|  | 270° |  |  |  |
|  | 300° |  |  |  |
|  | 315° |  |  |  |
|  | 330° |  |  |  |
|  | 360° |  |  |  |

**2. Draw the Unit Circle. Label all angles in degrees and radians, and all sine and cosine values.**

**Try to find the exact value of each expression without looking at the chart or unit circle.**

**3.** sin (–510°) **4.** sin 495° **5.** cos $\left(-\frac{5π}{2}\right)$

**6.** sin $\left(\frac{5π}{3}\right)$  **7.** cos 45° **8.** sin 210°

**9.** sin 330° **10.** cos 330° **11.** cos (–60°)

**12.** sin (–390°) **13.** sin 5π **14.** cos 3π

**15.** sin $\frac{5π}{2}$ **16.** sin $\frac{7π}{3}$ **17.** cos $\left(-\frac{7π}{3}\right)$

Answers:

3.$ -\frac{1}{2}$ 4.$ \frac{\sqrt{2}}{2}$ 5. 0 6. $-\frac{\sqrt{3}}{2}$ 7. $\frac{\sqrt{2}}{2}$ 8. $-\frac{1}{2}$ 9. $-\frac{1}{2}$

10. $\frac{\sqrt{3}}{2}$ 11. $\frac{1}{2}$ 12. $-\frac{1}{2}$ 13. 0 14. -1 15. 1 16. $\frac{\sqrt{3}}{2}$ 17. $\frac{1}{2}$