

The Unit Circle Worksheet #2  
Module 3, Unit 6, Lesson 4

Fill in the chart.

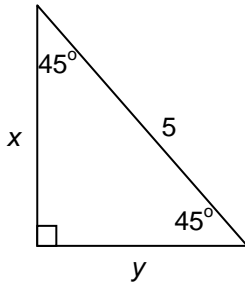
| $\theta$             | Terminates in Quadrant | Reference Angle | Draw Reference Triangle in Quadrant |
|----------------------|------------------------|-----------------|-------------------------------------|
| 1. $120^\circ$       |                        |                 |                                     |
| 2. $225^\circ$       |                        |                 |                                     |
| 3. $\frac{5\pi}{3}$  |                        |                 |                                     |
| 4. $\frac{3\pi}{4}$  |                        |                 |                                     |
| 5. $-315^\circ$      |                        |                 |                                     |
| 6. $240^\circ$       |                        |                 |                                     |
| 7. $-\frac{5\pi}{6}$ |                        |                 |                                     |
| 8. $\frac{4\pi}{3}$  |                        |                 |                                     |

| $\theta$              | Terminates in Quadrant | Reference Angle | Draw Reference Triangle in Quadrant |
|-----------------------|------------------------|-----------------|-------------------------------------|
| 9. $855^\circ$        |                        |                 |                                     |
| 10. $-510^\circ$      |                        |                 |                                     |
| 11. $\frac{13\pi}{6}$ |                        |                 |                                     |
| 12. $\frac{21\pi}{4}$ |                        |                 |                                     |
| 13. $705^\circ$       |                        |                 |                                     |
| 14. $1200^\circ$      |                        |                 |                                     |
| 15. $\frac{23\pi}{3}$ |                        |                 |                                     |
| 16. $-\frac{9\pi}{4}$ |                        |                 |                                     |

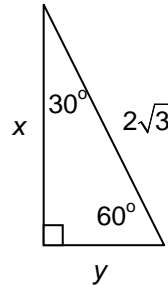
## Review

Use the Special Right Triangles to solve for  $x$  and  $y$ . Show all necessary work.

17.

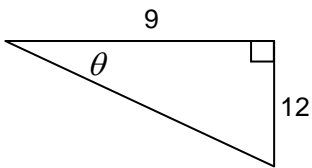


18.

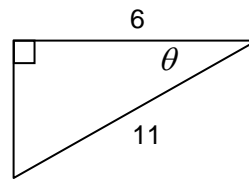


Find the value of each of the six trigonometric functions of  $\theta$ .

19.



20.



Find a positive angle less than  $360^\circ$  or  $2\pi$  that is coterminal with the given angles. Show all necessary work.

21.  $-1170^\circ$

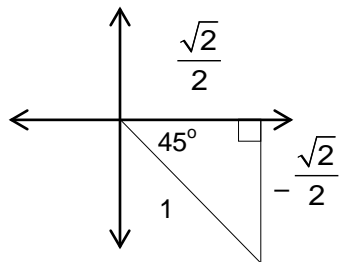
22.  $-\frac{16\pi}{3}$

23.  $945^\circ$

24.  $-\frac{31\pi}{4}$



16. Quadrant IV,  $45^\circ$



17.  $x = \frac{5\sqrt{2}}{2}, y = \frac{5\sqrt{2}}{2}$

18.  $x = 3, y = \sqrt{3}$

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

20.  $\sin \theta = \frac{\sqrt{85}}{11}$        $\csc \theta = \frac{11\sqrt{85}}{85}$   
 $\cos \theta = \frac{6}{11}$        $\sec \theta = \frac{11}{6}$   
 $\tan \theta = \frac{\sqrt{85}}{6}$        $\cot \theta = \frac{6\sqrt{85}}{85}$

21.  $270^\circ$

22.  $\frac{2\pi}{3}$

23.  $225^\circ$

24.  $\frac{\pi}{4}$