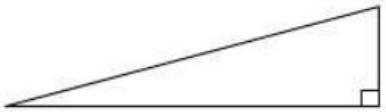
Reference angles and their triangles – Radian measure only

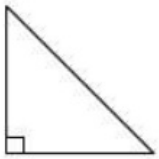
$\sin\theta =$ ——

$\cos\theta =$ ——

$\tan\theta =$ ——

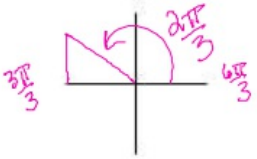
Label all of the ***sides*** and ***angles*** of the special triangles



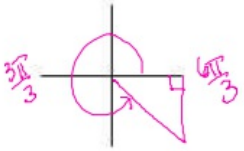


Given an angle - determine the reference angle, then draw the reference triangle.
Label the sides of each triangle, then evaluate each trigonometric function.

1. $\theta = \frac{2\pi}{3}$ $\theta' =$



2. $\theta = \frac{5\pi}{3}$ $\theta' =$ π/3



3. $\theta = \frac{5\pi}{4}$ $\theta' =$

1a. $\sin\left(\frac{2\pi}{3}\right) =$

2a. $\cos\left(\frac{5\pi}{3}\right) =$

3a. $\tan\left(\frac{5\pi}{4}\right) =$

1b. $\sec\left(\frac{2\pi}{3}\right) =$

2b. $\cot\left(\frac{5\pi}{3}\right) =$

3b. $\csc\left(\frac{5\pi}{4}\right) =$

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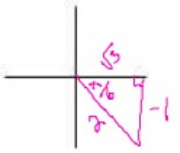
4. $\theta = \frac{\pi}{4}$ $\theta' =$

5. $\theta = -\frac{\pi}{6}$ $\theta' =$ π/6



6. $\theta = \frac{7\pi}{6}$ $\theta' =$

4a. $\sin\left(\frac{\pi}{4}\right) =$

5a. $\cos\left(-\frac{\pi}{6}\right) =$

6a. $\tan\left(\frac{7\pi}{6}\right) =$

4b. $\cot\left(\frac{\pi}{4}\right) =$

5b. $\csc\left(-\frac{\pi}{6}\right) =$

6b. $\sec\left(\frac{7\pi}{6}\right) =$

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7. $\theta = \frac{7\pi}{4}$ $\theta' =$

8. $\theta = \frac{4\pi}{3}$ $\theta' =$

9. $\theta = \frac{9\pi}{4}$ $\theta' =$

7a. $\sin\left(\frac{7\pi}{4}\right) =$

8a. $\cos\left(\frac{4\pi}{3}\right) =$

9a. $\tan\left(\frac{9\pi}{4}\right) =$

7b. $\sec\left(\frac{7\pi}{4}\right)=$

8b. $\cot\left(\frac{4\pi}{3}\right)=$

9b. $\csc\left(\frac{9\pi}{4}\right)=$

10. $\theta=-\frac{7\pi}{6}$ $\theta'=$

11. $\theta=-\frac{\pi}{3}$ $\theta'=$

12. $\theta=\frac{3\pi}{4}$ $\theta'=$

10a. $\sin\left(-\frac{7\pi}{6}\right)=$

11a. $\cos\left(-\frac{\pi}{3}\right)=$

12a. $\tan\left(\frac{3\pi}{4}\right)=$

10b. $\cot\left(-\frac{7\pi}{6}\right)=$

11b. $\csc\left(-\frac{\pi}{3}\right)=$

12b. $\sec\left(\frac{3\pi}{4}\right)=$

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13. $\theta=\frac{11\pi}{6}$ $\theta'=$

14. $\theta=-\frac{2\pi}{3}$ $\theta'=$

15. $\theta=\frac{5\pi}{6}$ $\theta'=$

13a. $\sin\left(\frac{11\pi}{6}\right)=$

14a. $\cos\left(-\frac{2\pi}{3}\right)=$

15a. $\tan\left(\frac{5\pi}{6}\right)=$

13b. $\sec\left(\frac{11\pi}{6}\right)=$

14b. $\cot\left(-\frac{2\pi}{3}\right)=$

15b. $\csc\left(\frac{5\pi}{6}\right)=$

Quadrantal Angles

$\sin\theta=$ ——

$\cos\theta=$ ——

$\tan\theta=$ ——

16. $\theta=\frac{\pi}{2}$

17. $\theta=\pi$

18. $\theta=\frac{3\pi}{2}$

16a. $\sin\left(\frac{\pi}{2}\right)=$

17a. $\cos(\pi)=$

18a. $\tan(\pi)=$

16b. $\sec\left(\frac{\pi}{2}\right)=$

17b. $\cot(\pi)=$

18b. $\csc(\pi)=$