

Problems | Name: _____

7.1 Fundamental Identities

7.1.1. Simplify $\sec^2 x - \tan^2 x$.

7.1.2. If $\sin x = 3/5$ and x is in quadrant II, find cosine.

7.1.3. Show that $\tan x \cos x = \sin x$ and state the original restriction.

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7.2 Angle Sum and Double-Angle Identities

7.2.1. Find $\cos(\pi/12)$ exactly.

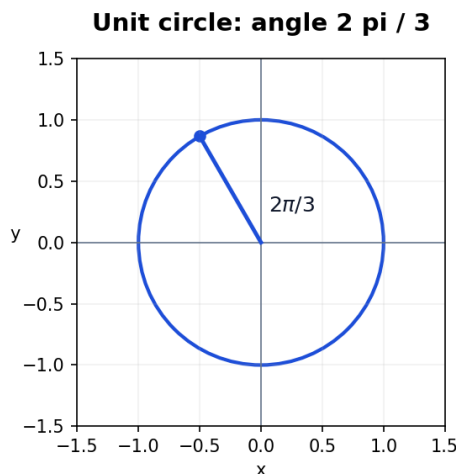
7.2.2. If $\sin x = 3/5$, find $\cos(2x)$.

7.2.3. Explain why $\sin(a + b) = \sin a + \sin b$ is false.

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7.3 Solving Trigonometric Equations

7.3.1. Solve $\sin x = \sqrt{3}/2$ on $[0, 2\pi)$.



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Cosine is the horizontal coordinate and sine the vertical coordinate.

7.3.2. Solve $\sin x \cos x = 0$ on $[0, 2\pi)$.

7.3.3. Give all real solutions to $\tan x = 1$.