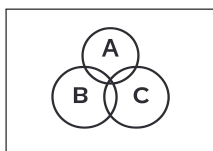
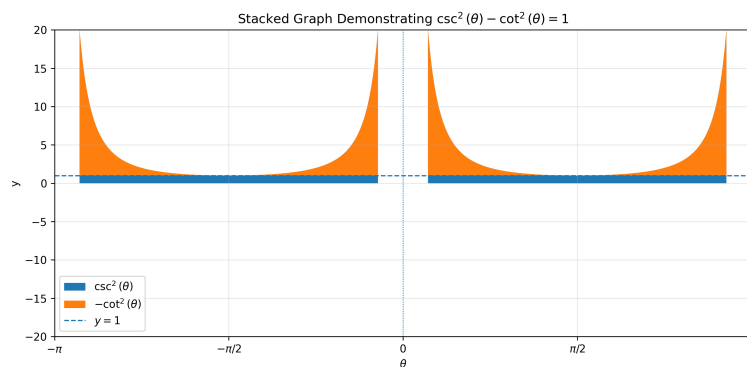
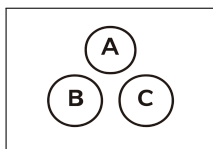


29 Formulas and Identities

Pythagorean Identities

C



$$\csc^2(\theta) - \cot^2(\theta) = 1$$

$$y_1 = 16 \csc^2(3\theta + \pi/4)$$

$$y_2 = 16 \cot^2(3\theta + \pi/4)$$

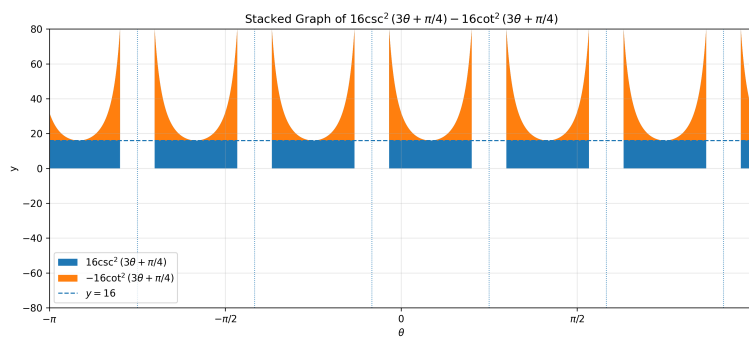
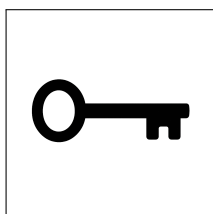
$$y_1 - y_2 = ?$$

?

29 Formulas and Identities

Pythagorean Identities

C



$$y_1 = 16 \csc^2(3\theta + \pi/4)$$

$$y_2 = 16 \cot^2(3\theta + \pi/4)$$

$$u = 2\theta + \pi/4$$

$$\csc^2(u) - \cot^2(u) = 1$$

$$y_1 - y_2 = 16 \csc^2(u) - 16 \cot^2(u)$$

$$y_1 - y_2 = 16(\csc^2(u) - \cot^2(u))$$

$$y_1 - y_2 = 16(1)$$

$$y_1 - y_2 = 16$$