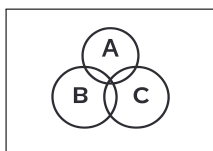
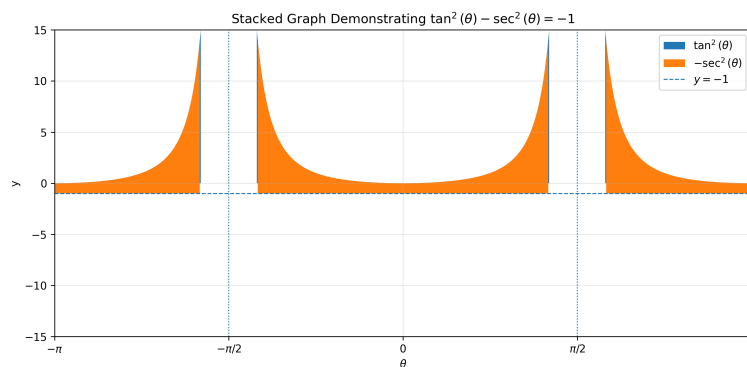
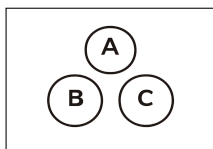


29 Formulas and Identities

Pythagorean Identities

B

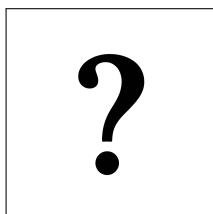


$$\tan^2(\theta) - \sec^2(\theta) = -1$$

$$y_1 = 9 \tan^2(2\theta - \pi/3)$$

$$y_2 = 9 \sec^2(2\theta - \pi/3)$$

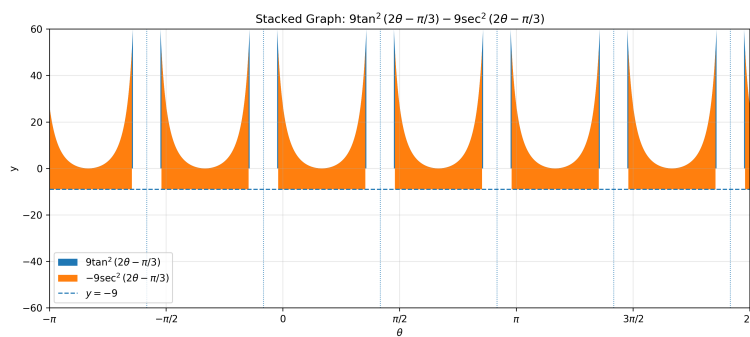
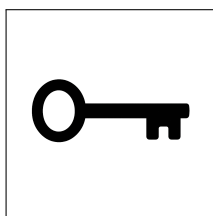
$$y_1 - y_2 = ?$$



29 Formulas and Identities

Pythagorean Identities

B



$$y_1 = 9 \tan^2(2\theta - \pi/3)$$

$$y_2 = 9 \sec^2(2\theta - \pi/3)$$

$$u = 2\theta - \pi/3$$

$$\tan^2(u) - \sec^2(u) = -1$$

$$y_1 - y_2 = 9 \tan^2(u) - 9 \sec^2(u)$$

$$y_1 - y_2 = 9(\tan^2(u) - \sec^2(u))$$

$$y_1 - y_2 = 9(-1)$$

$$y_1 - y_2 = -9$$