

Modeling with Trigonometric Functions

Without a calculator, sketch the graph of the following:

a. $y = 4 \cos 2\left(x - \frac{\pi}{4}\right) + 1$

b. $y = 3 \sin \frac{\pi}{4}(x + 1) - 2$

c. $y = 1.5 \csc(3x - \pi) - 1$

d. $y = \tan \frac{1}{2}\left(x - \frac{\pi}{4}\right)$

Then, check your sketch against what the calculator shows.