

Answer on Question #58220 – Math – Trigonometry

Question

What is the minimum number of points required to mark all maximum, minimum, and zeros in a period of a sinusoid?

Solution

The minimum number of points is five per period since for $y = \sin(x)$ from $x = 0$ to $x = 2\pi$ there exists a maximum ($\sin\left(\frac{\pi}{2}\right) = 1$), a minimum ($\sin\left(\frac{3\pi}{2}\right) = -1$) and 3 zeros ($\sin(0) = 0, \sin(\pi) = 0, \sin(2\pi) = 0$).

Answer: 5 points.