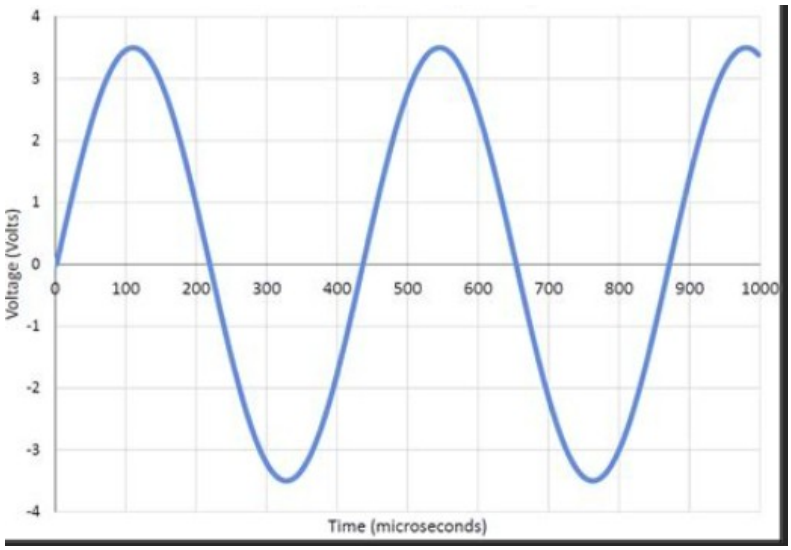
1) Consider the following function. The x-axis shows the time in us (microseconds)
The y-axis shows the voltage in volts. The voltage is measured across an electric component and displayed on a screen.The voltage is a function of time.



The time is in microseconds (us). 1 us is 0.000001 s or 1 us = 10^{-6} s
A) Let's find the period.
It is hard to read the time for one cycle. But you can easily read the time for 1 ½ cycle (1.5).
The time for 1.5 cycle is _____ us
Therefore the time for one cycle is _____ us or _____s. (hint: convert us to s)
This is the period T.

The frequency is then _____ Hz.

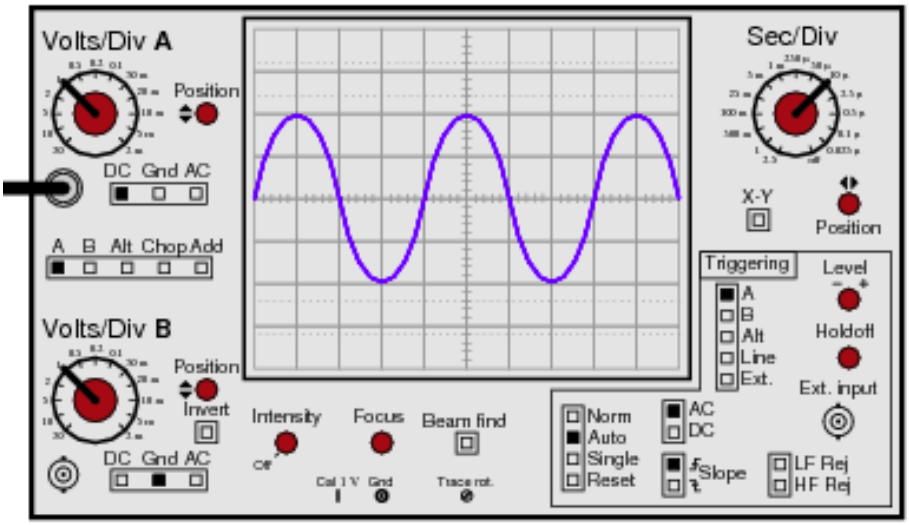
B) The peak value is about _____V
A voltmeter read the rms value (root means quare) which is about 70% of the peak value or _____ V

C) Is it a sine function or a cosine function ? How to you know?

What is the equation of this sine wave ?

Use wolfram alpha to check your answer.

2)



This oscilloscope has the following scales: **10uS per division** (10 microseconds) and 0.5V per division.

What is the period of the wave in divisions? T = _____

What is the period of the wave in us ? (use the scale/proportion) _____

What is the period in seconds ? (1 us = 0.000001 s or a millionth)

What is the frequency ?

3) Open wolfram alpha

plot y=5*sin(2*pi*x/3) from 0 to 12

You can check if this is the right plot by building a table :

x	y
0	
0.5	
1	
1.5	
2	
2.5	
3	