

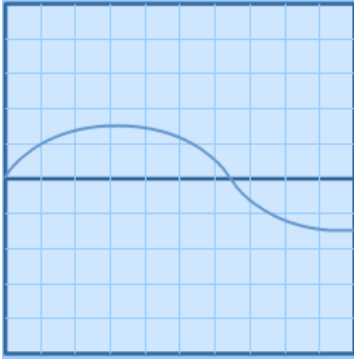
3.30 describe on experiment using an oscilloscope to determine the frequency of a sound wave.

Measure the time period (T) of the waves below then calculate their frequencies (f):

The time per division along the x-axis is given below each oscilloscope trace
e.g. 1s/div means that one square horizontally represents a time of 1 second.

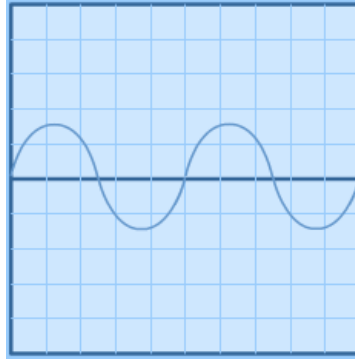
1.

a)



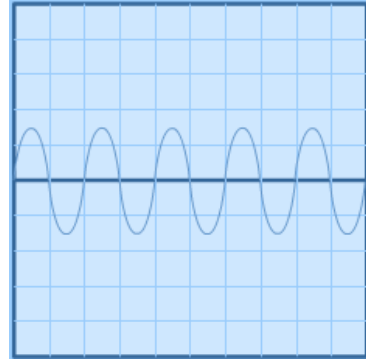
1s/div

b)



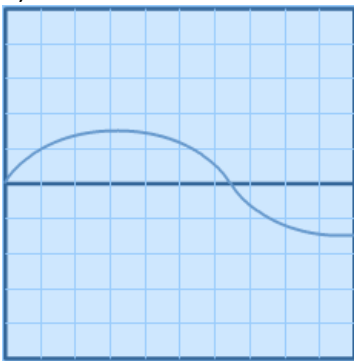
1s/div

c)



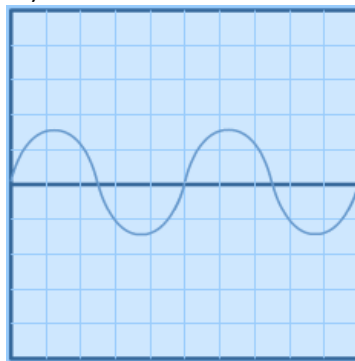
1s/div

d)



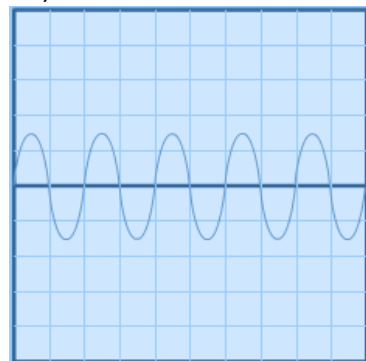
0.5ms/div

e)



5ms/div

f)



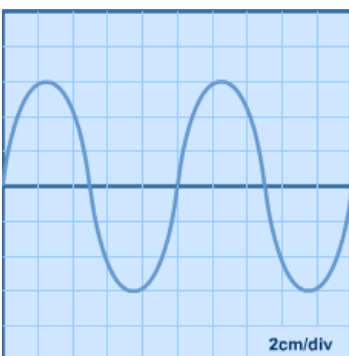
20ms/div

Extension work.

If we know the size of one square on the vertical, y-axis, it is also possible to calculate the amplitude of the wave:

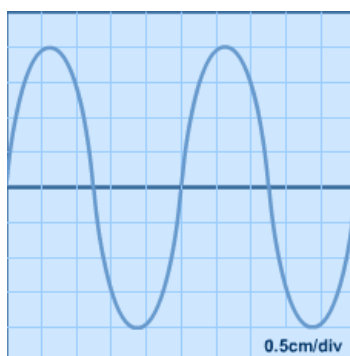
2.

a)



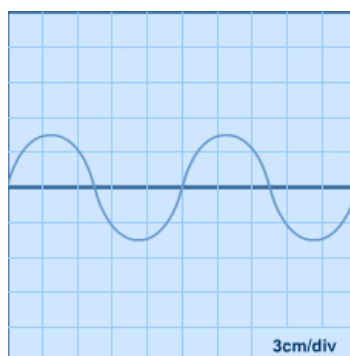
2cm/div

b)



0.5cm/div

c)



3cm/div