What scientists were responsible for the Wave-Particle of Light Theory?

In the diagram below, identify the parts of a wave by using the provided definitions.

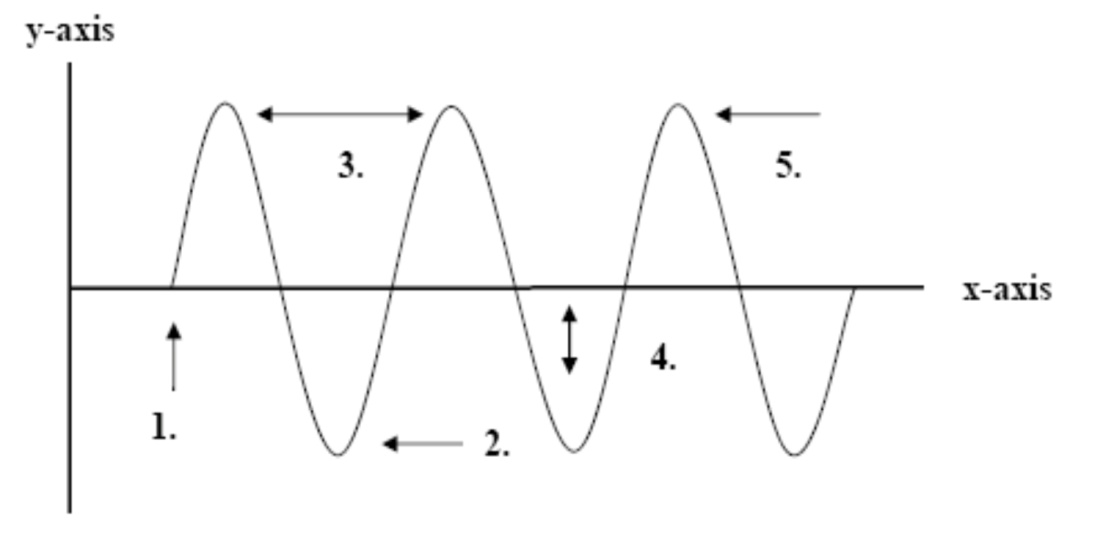
**#\_\_\_\_ = crest** The highest point of the wave above the line of origin.

**#\_\_\_\_ = trough** The lowest point of the wave below the line of origin.

**#\_\_\_\_ = line of origin** Signifies the original position of the medium.

**#\_\_\_\_ = wavelength** The distance between two consecutive crests.

**#\_\_\_\_ = amplitude** The distance from the line of origin to a crest or trough of a wave.



In space below, draw the following requests:

1. A wave with high frequency
2. A wave with low frequency
3. A wave with a low amplitude
4. A wave with high amplitude

Which drawing above (1-4) has the longest wavelength?

Which drawing above (1-4) has the shortest wavelength?

For the chart below calculate the wavelength, frequency, or energy of the wave. Show your work in the boxes for credit.

|  |  |  |
| --- | --- | --- |
| Wavelength (m)  c=2.998 x 108 m/s | Frequency (Hz) | Energy (J)  h=6.626 x 10-34 |
|  | 5.451 x 106 Hz |  |
|  |  | 4.414 x 10-19 J |
|  | 7.10 x 1014 Hz |  |
| 422nm |  |  |
| 4.257cm |  |  |
|  |  | 3.2 x 10-19 J |