KARAKTERISTIK GELOMBANG

memahami
karakteristik gelombang
#tujuan

https://www.freepik.com/vectors/business :(Business vector created by rawpixel.com - www.freepik.com)

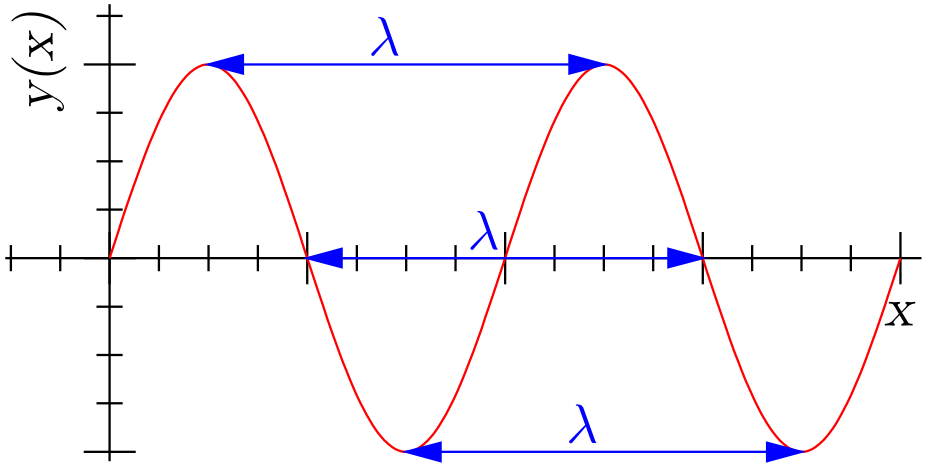
#Karakteristik_Gelombang

- **Panjang gelombang;** λ
- **Amplitudo;** A
- **Frekuensi;** f
- **Periode;** T
- **Kecepatan gelombang;** v

https://thumbs.gfycat.com/CreativeDefiniteGuanaco-size_restricted.gif

#PanjangGelombang

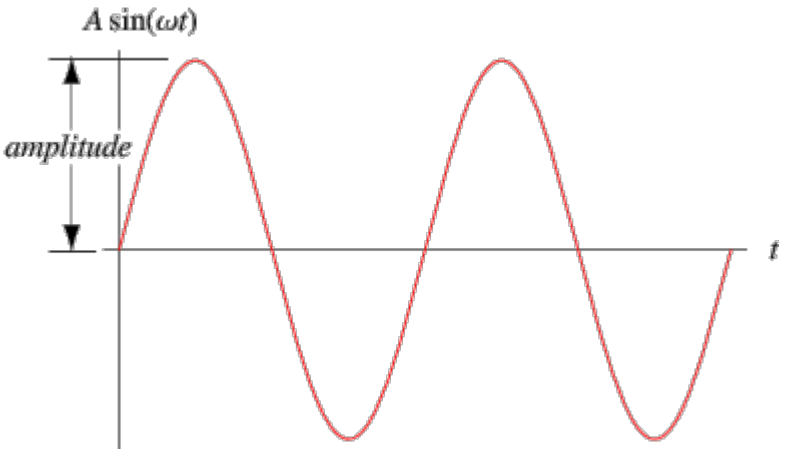
jarak antara dua titik/puncak/lembah yang berurutan; λ



https://en.wikipedia.org/wiki/Wavelength

#Amplitudo

jarak/simpangan terjauh dari titik kesetimbangan; A

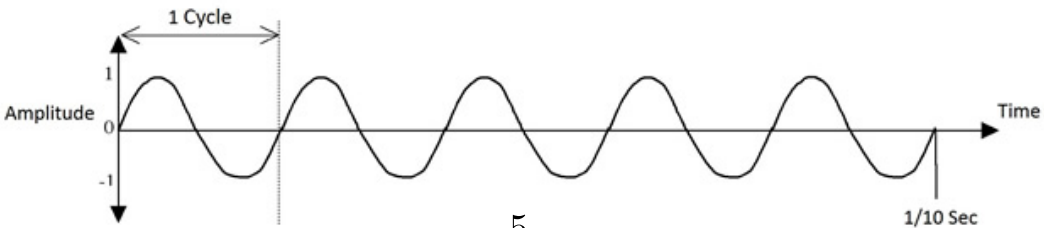


https://mathworld.wolfram.com/Amplitude.html

#Frekuensi

jumlah getaran/gelombang yang dihasilkan setiap 1 detik; f

$$f = \frac{\#\text{ of wavelength}}{\text{time}}$$



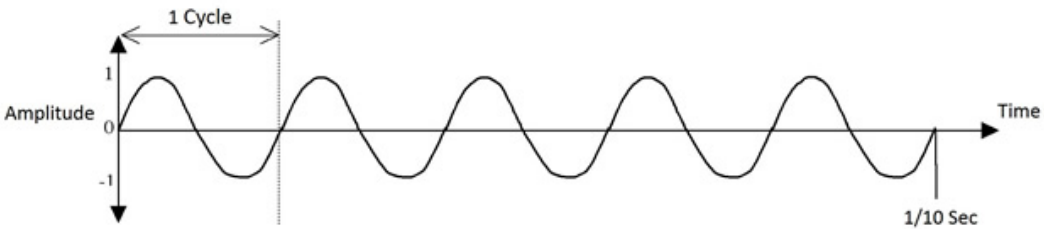
$$f = \frac{5}{1/10} = 50\text{Hz}$$

https://www.hsa.org.uk/electricity/waveform-and-frequency

#Periode

waktu yang dibutuhkan untuk menghasilkan satu gelombang; T

$$T = \frac{\text{time}}{\#\ \text{of wavelength}}$$



$$T = \frac{1/10}{5} = 0.02\text{s}$$

https://www.hsa.org.uk/electricity/waveform-and-frequency

#Frekuensi_&_Periode

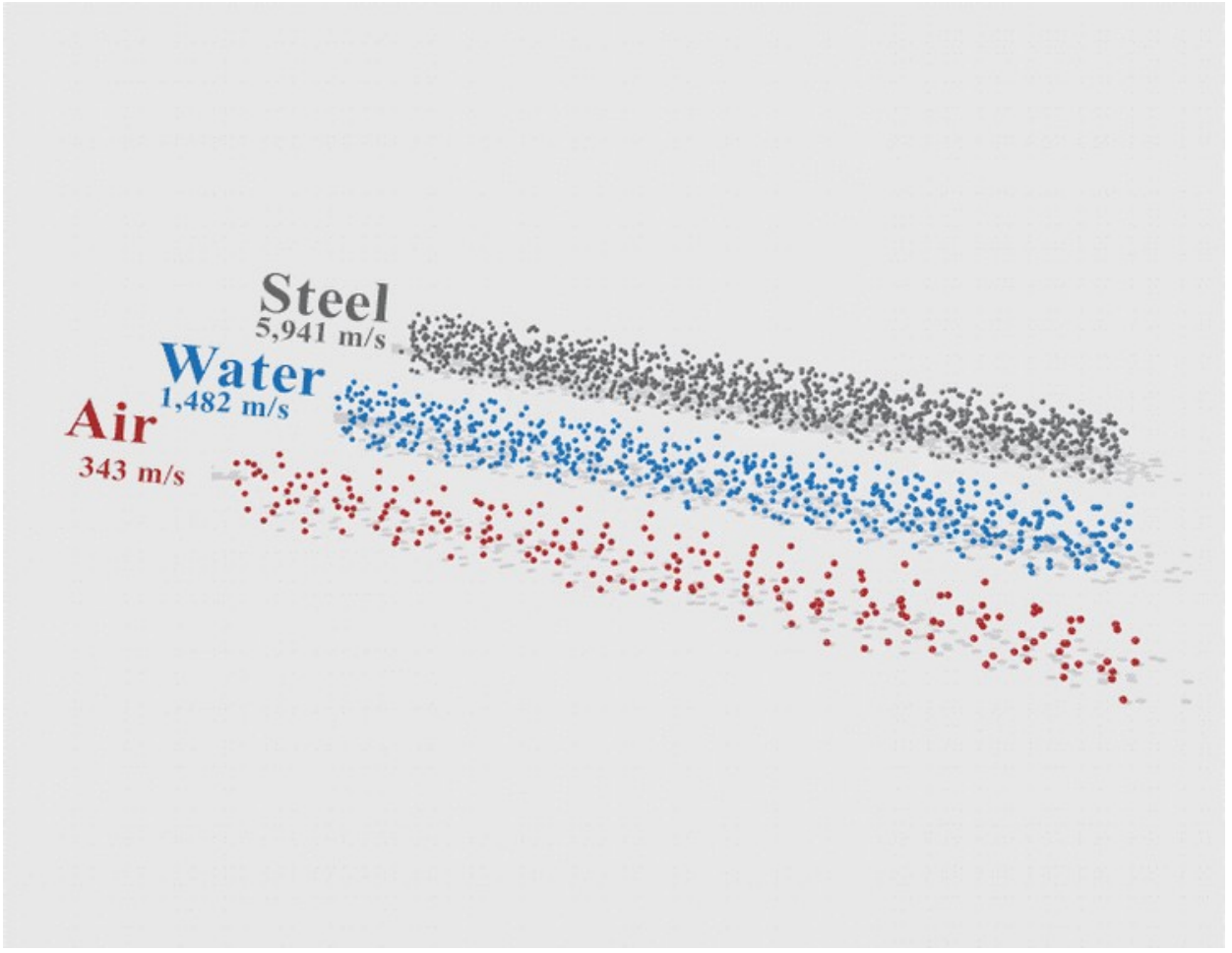
$$f = \frac{\#\text{ of wavelength}}{\text{time}} \qquad T = \frac{\text{time}}{\#\text{ of wavelength}}$$

$$f = \frac{1}{T} \qquad T = \frac{1}{f}$$

#KecepatanGelombang

$$v = \frac{\lambda}{T}$$

$$v = \lambda \cdot f$$



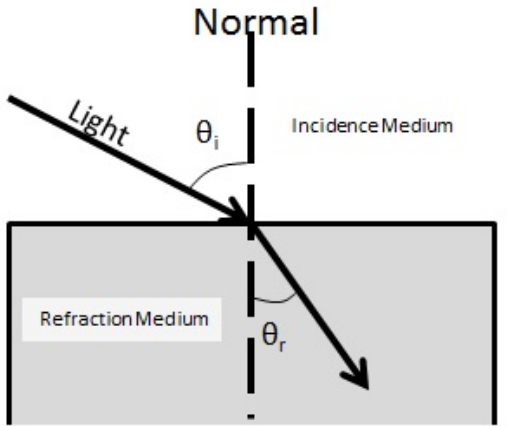
https://encrypted-tbn0.gstatic.com/images?q=tbn%3AANd9GcRsQy7a176mkpZQVPOddoQZvL9_GNAki9QBpw&usqp=CAU

Speed of Light in Different Media

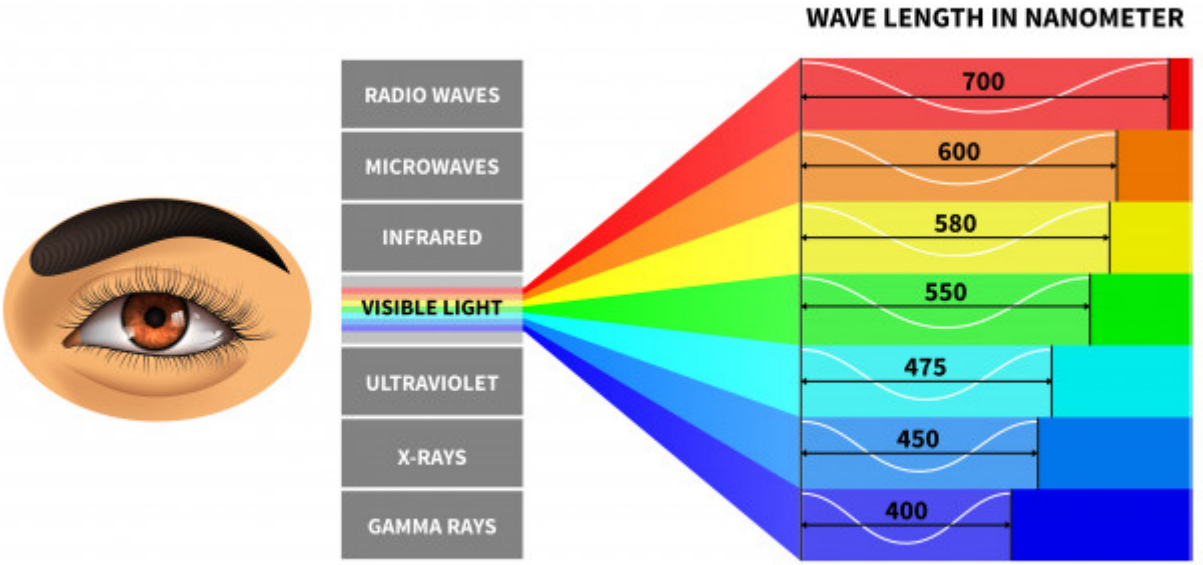
Medium	Speed of Light (km/s)	Index of Refraction (*n*)
air	300 000	1.00
ice	229 000	1.31
liquid water	226 000	1.33
vegetable oil	204 000	1.47
glass	197 000	1.52
ruby	170 000	1.76
diamond	124 000	2.42

$$n_i * \sin\theta_i = n_r * \sin\theta_r$$

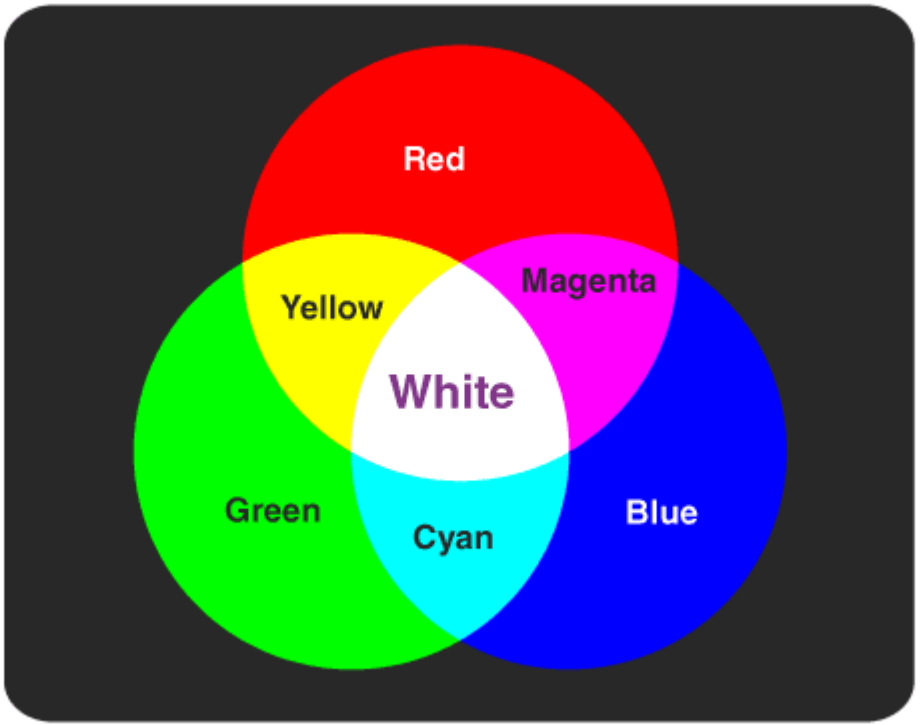
n_i = Index of Refraction of Incidence Medium
n_r = Index of Refraction of Refraction Medium
θ_i = Angle of Incidence
θ_r = Angle of Refraction



https://www.quora.com/What-is-the-effect-on-wavelength-frequency-and-speed-of-light-when-it-passes-from-one-medium-to-another-medium
https://www.polyu.edu.hk/proj/gef/index.php/glossary/snells-law/

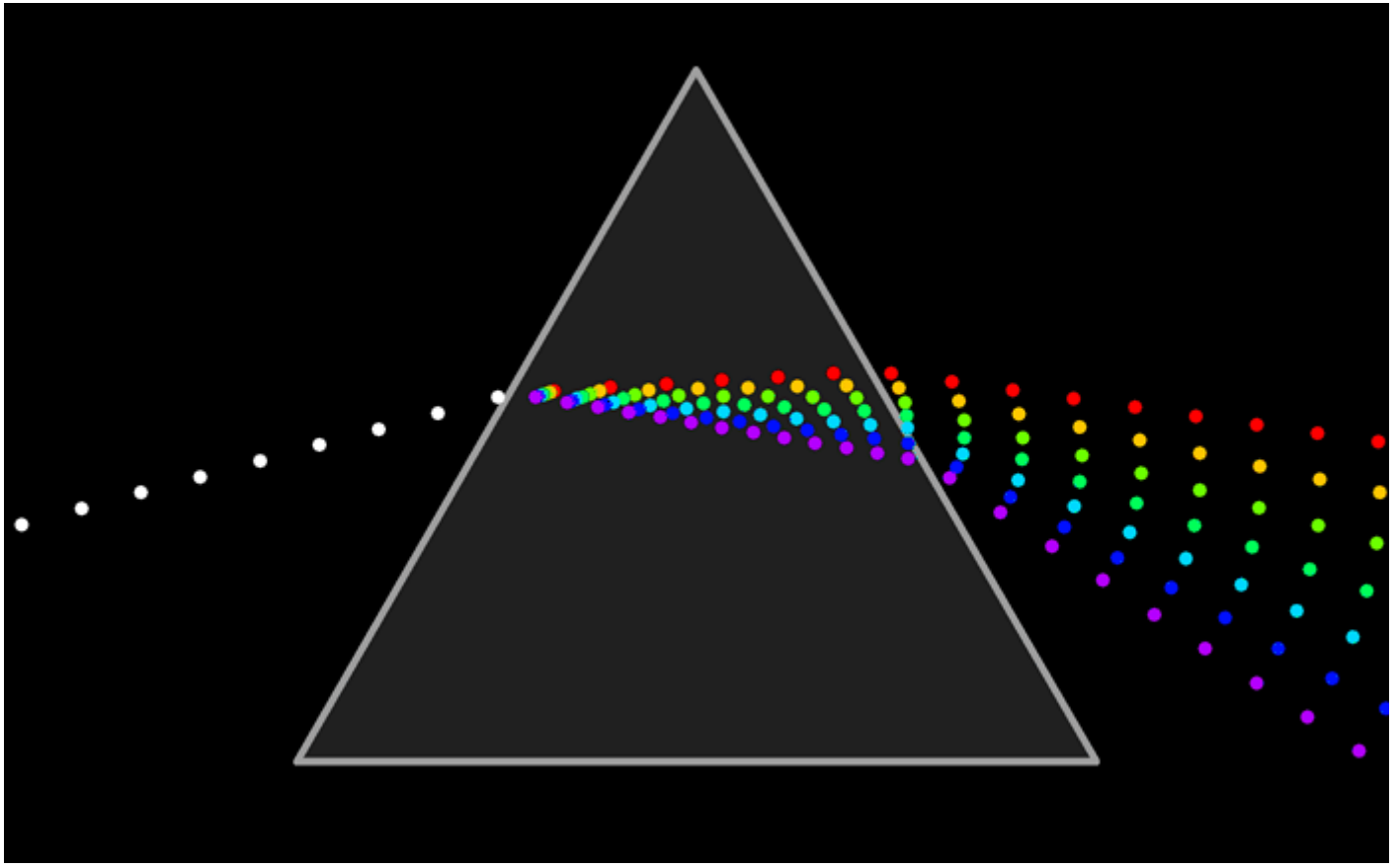


https://image.freepik.com/free-vector/visible-light-spectrum-template_53562-9303.jpg



BYJU'S
The Learning App

https://byjus.com/physics/white-light/



Animasi → *https://www.pinterest.se/pin/84899896722894947 3/*