

Choose the correct answers for the following questions.



8- Which of the following lights has the lowest frequency?

- A. The violet light.
- B. The red light.
- C. The yellow light.
- D. The green light.

9- Which of the following lights has the lowest frequency?

- A. The violet light.
- B. The green light.
- C. The yellow light.
- D. The blue light.

10- Which of the following lights has the highest frequency?

- A. The violet light.
- B. The red light.
- C. The yellow light.
- D. The green light.

11- Which of the following lights has the longest wavelength?

- A. The violet light.
- B. The green light.
- C. The yellow light.
- D. The blue light.

12- Which of the following lights has the **shortest wavelength?**

- A. The red light.
- B. The green light.
- C. The yellow light.
- D. The blue light.

13- Which of the following lights has the **lowest energy?**

- A. The red light.
- B. The green light.
- C. The yellow light.
- D. The blue light.

Answer the following questions:

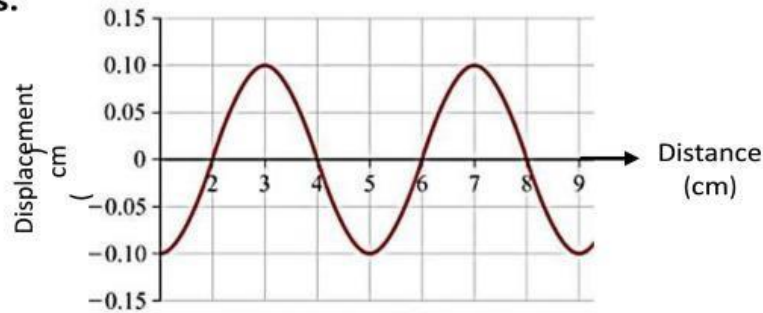
1-

2- Study the table to answer the following questions.

What is the speed of light in water?	$\times 10^8$
In which medium the speed of light is the highest?	$\times 10^8$
In which medium the speed of light is the lowest?	$\times 10^8$

Material	Refractive index	Speed of light /ms ⁻¹
Air	1.00	3.0×10^8
Water	1.33	2.3×10^8
Perspex	1.49	2.0×10^8
Glass	1.50	2.0×10^8
Diamond	2.42	1.2×10^8

3- Use the data on the (Displacement- Distance) graph to answer the questions.



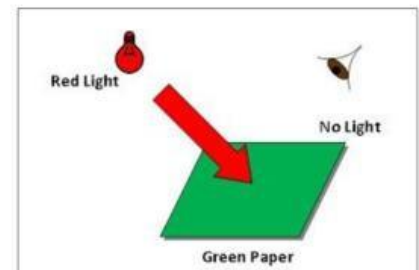
- What is the wavelength of this wave?cm
- What is the amplitude of this wave?cm

4- If a **red light** falls on a **green paper**.

- What color would the apple look like?

.....

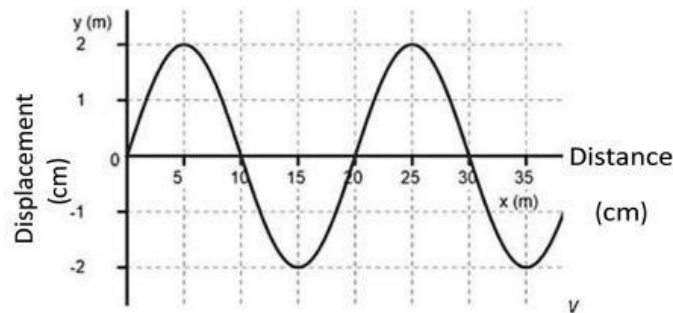
- Explain your answer.



Because the paper will.....(absorbs, reflects, refracts)

the red color and(no, all) light will reflect to the eye.

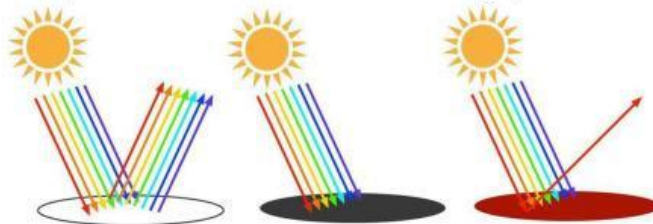
5- Use the data on the (Displacement- Distance) graph to answer the questions.



- What is the wavelength of this wave? cm
- What is the amplitude of this wave? cm
- How can you change the frequency of this wave to make its wavelength shorter?

I have to (increase, decrease) the frequency then the wavelength will decrease.

6- Relay on the bar photo to answer the following questions:



- What are the colors of the light spectrum?

Violet - Indigo - - Green - - Orange -

- Which color reflects all the light?
- Which color absorbs all the light?
- The red color reflects only the light and all the others.

Order Electromagnetic waves from **most energetic** to **lowest energetic** waves

Order visible light from **most energetic** to **lowest energetic** waves.
