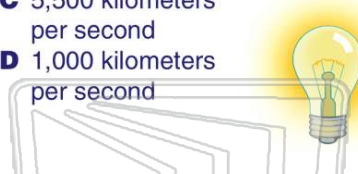




Name _____ Class _____ Date _____

1 What is the **speed** at which light travels?

- A 5,500 kilometers per minute
- B 300,000 kilometers per second
- C 5,500 kilometers per second
- D 1,000 kilometers per second



2 In the diagram below, light has passed through a glass **prism** and broken up into different colors. This **breakdown** into different colors is called _____.

- A reflection
- B transmission
- C refraction
- D diversion



3 In the diagram below, visible light has been **refracted** into different colors. This **separation occurs** because these different colors of light have different _____.

- A amplitudes
- B powers



4 In the diagram below a **rainbow** has formed. What is the cause of this rainbow?

- A sunlight is refracted through raindrops
- B sunlight is reflected through raindrops



5



PREVIEW

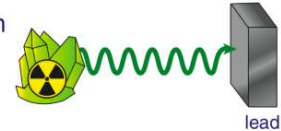
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7

- A true
- B false



- A visible light
- B alpha radiation
- C gamma rays
- D radio waves



9

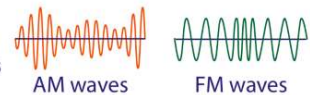
What is the reason why **gamma rays** and **X-rays** are more harmful to humans than radio waves?

- A they have lower frequencies but more energy
- B they have higher frequencies and more energy
- C they have more amplitude
- D they are less penetrating

10

These waves have the **longest wavelengths** and the **lowest frequencies** on the electromagnetic spectrum. What **kind of waves** are shown here?

- A microwaves
- B gamma rays
- C X-rays
- D radio waves

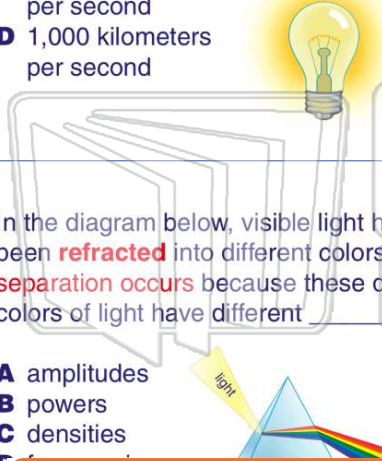




ANSWER KEY

What is the **speed** at which light travels?

- A 5,500 kilometers per minute
- B 300,000 kilometers per second
- C 5,500 kilometers per second
- D 1,000 kilometers per second



(b)

In the diagram below, light has passed through a glass **prism** and broken up into different colors. This **breakdown** into different colors is called _____.

- A reflection
- B transmission
- C refraction
- D diversion



(c)

In the diagram below, visible light has been **refracted** into different colors. This **separation occurs** because these different colors of light have different _____.

- A amplitudes
- B powers
- C densities
- D frequencies



(d)

In the diagram below a **rainbow** has formed. What is the cause of this rainbow?

- A sunlight is refracted through raindrops
- B sunlight is reflected through raindrops
- C the air is transparent
- D sunlight is refracted through the air



(a)



PREVIEW

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What is the reason why **gamma rays** and **X-rays** are more harmful to humans than radio waves?

- A they have lower frequencies but more energy
- B they have higher frequencies and more energy
- C they have more amplitude
- D they are less penetrating

(b)

These waves have the **longest wavelengths** and the **lowest frequencies** on the electromagnetic spectrum. What **kind of waves** are shown here?

- A microwaves
- B gamma rays
- C X-rays
- D radio waves



(d)