

Optics: Key Facts & Figures

Optics · Answer Key · 8 Questions

1. Who first correctly described the law of refraction, often known as Snell's Law, around 1621?

- A) Isaac Newton
- B) Christiaan Huygens
- C) Willebrord Snellius**
- D) Galileo Galilei

2. In which year did Isaac Newton publish his groundbreaking work 'Opticks,' detailing his experiments and theories on light and color?

- A) 1678
- B) 1704**
- C) 1727
- D) 1666

3. Which ancient scholar, often referred to as 'the father of optics,' wrote 'Kitab al-Manazir' (Book of Optics) around 1021 AD?

- A) Aristotle
- B) Ptolemy
- C) Ibn al-Haytham (Alhazen)**
- D) Euclid

4. Galileo Galilei significantly improved the astronomical telescope and used it for observations starting in which year?

- A) 1589
- B) 1609**
- C) 1632
- D) 1665

5. What is the approximate speed of light in a vacuum, a fundamental constant in optics and physics?

- A) 3×10^5 m/s
- B) 3×10^8 m/s**
- C) 3×10^{10} m/s
- D) 3×10^2 m/s

6. Who proposed the wave theory of light in his 'Treatise on Light' (Traité de la lumière) published in 1690?

A) Robert Hooke

B) Christiaan Huygens

C) Isaac Newton

D) Thomas Young

7. Albert Einstein published his paper explaining the photoelectric effect in which pivotal year, contributing to the quantum theory of light?

A) 1895

B) 1905

C) 1915

D) 1925

8. Approximately what is the wavelength range (in nanometers) for visible light that the human eye can perceive?

A) 100-200 nm

B) 400-700 nm

C) 800-1000 nm

D) 1500-2000 nm