

Exploring the World of Colors and Shapes

Colors & Shapes · Answer Key · 18 Questions

1. Which phenomenon is responsible for us perceiving color, involving the interaction of light waves with objects and our eyes?

- A) Sound wave refraction
- B) Light wave absorption and reflection**
- C) Gravitational lensing
- D) Magnetic field induction

2. In traditional subtractive color mixing, what are the primary colors that artists often use to create a wide spectrum of other colors?

- A) Red, Green, Blue
- B) Yellow, Cyan, Magenta**
- C) Orange, Violet, Green
- D) Black, White, Grey

3. What is the term for a line segment that passes through the center of a circle and has its endpoints on the circle?

- A) Radius
- B) Tangent
- C) Diameter**
- D) Chord

4. The perceived brightness of a color is referred to as its:

- A) Hue
- B) Saturation
- C) Value**
- D) Chroma

5. Which geometric shape has an infinite number of vertices and edges?

- A) Circle
- B) Sphere
- C) Line**
- D) Point

6. What is the name given to the sensation of a pure color, like the redness of a stop sign?

- A) Tint
- B) Hue**
- C) Tone
- D) Shade

7. In art and design, colors that are opposite each other on the color wheel are known as:

- A) Analogous colors
- B) Monochromatic colors
- C) Complementary colors**
- D) Triadic colors

8. What is the mathematical term for a polygon with 12 sides?

- A) Heptagon
- B) Dodecagon**
- C) Hendecagon
- D) Icosagon

9. The phenomenon where light bends as it passes from one medium to another (e.g., from air to water) is called:

- A) Diffraction
- B) Reflection
- C) Refraction**
- D) Interference

10. Which color is considered the longest wavelength color in the visible light spectrum?

- A) Violet
- B) Blue
- C) Green
- D) Red**

11. A shape with three sides and three angles is a:

- A) Quadrilateral
- B) Pentagon
- C) Hexagon
- D) Triangle**

12. What does 'achromatic' refer to in terms of color?

- A) Colors with high saturation
- B) Colors that are pure and vibrant
- C) Colors that lack hue, such as black, white, and grey**
- D) Colors mixed with their complements

13. The intensity or purity of a color is known as its:

- A) Hue
- B) Value
- C) Saturation**
- D) Luminance

14. Which 3D shape is defined by a set of points equidistant from a central point?

- A) Cube
- B) Cone
- C) Sphere**
- D) Cylinder

15. What is the basic unit of color in additive color mixing, often used in digital displays like screens?

- A) Yellow
- B) Cyan
- C) Blue
- D) Red**

16. A four-sided polygon with all sides equal and all angles equal is called a:

- A) Rectangle
- B) Rhombus
- C) Trapezoid
- D) Square**

17. When white light passes through a prism, it separates into its constituent colors. This is known as:

- A) Dispersion**
- B) Diffraction
- C) Interference
- D) Polarization

18. What type of angle measures exactly 90 degrees?

- A) Acute angle
- B) Obtuse angle
- C) Right angle**
- D) Straight angle