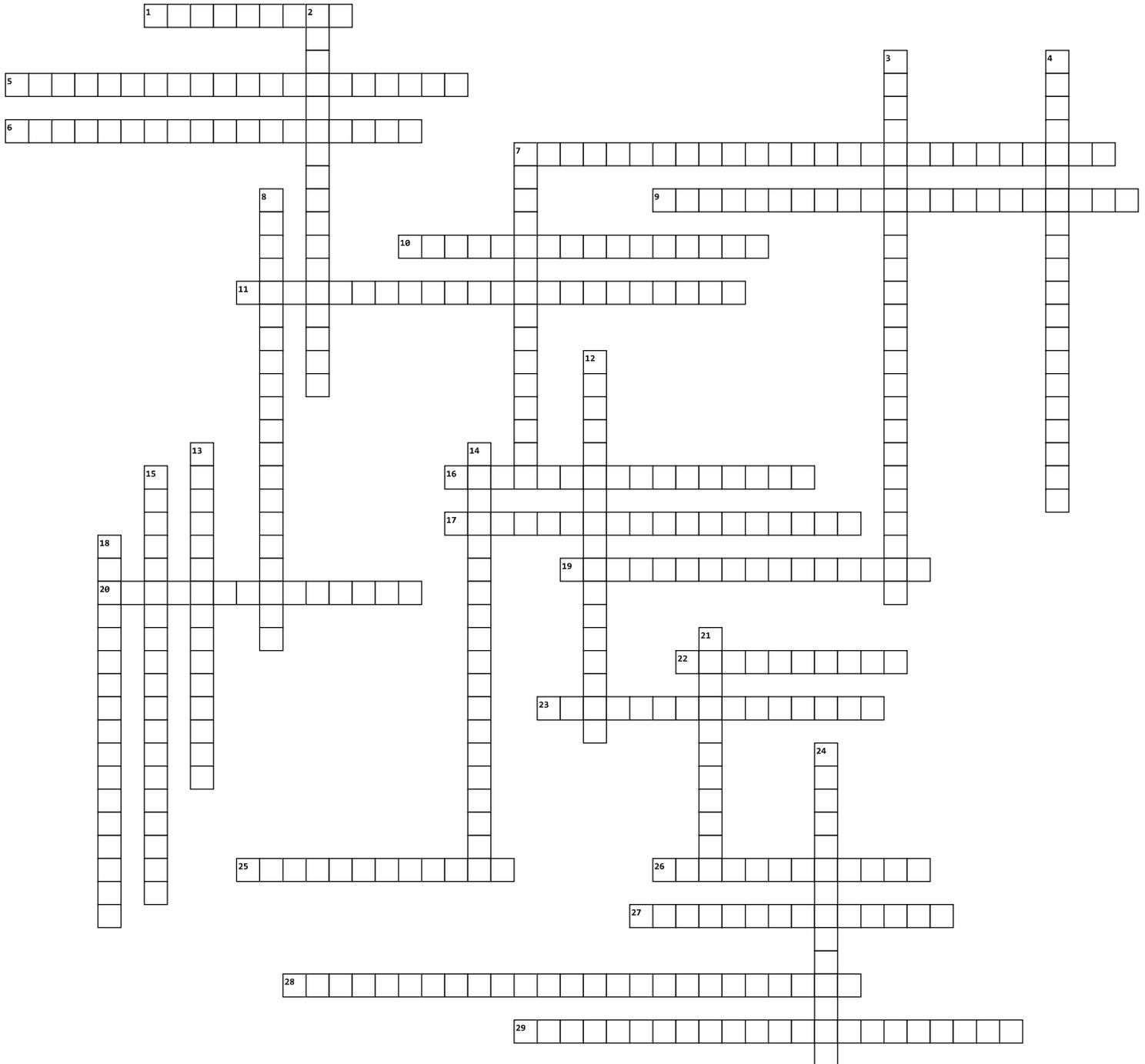


Wave optics



Across

1. A law that describes the intensity of polarized light passing through a polarizer.
5. A technique of varying the amplitude of a wave to encode information.
6. The angle at which light is polarized upon reflection.
7. The polarization of light that occurs when it is reflected off a surface.

Down

2. The rate of change of the phase of a wave with time, related to its frequency.
3. Interference that occurs when waves are out of phase, resulting in decreased amplitude.
4. The state of light that is partially polarized, exhibiting characteristics of both polarized and unpolarized light.

- 9.** The concept that light and other electromagnetic waves exhibit both particle and wave properties.
- 10.** The difference in phase between two points on a wave or between two waves.
- 11.** A type of diffraction that occurs when the light source and the screen are far from the diffracting object.
- 16.** Two sources that emit waves of the same frequency and phase difference.
- 17.** An experiment that demonstrates the wave nature of light through interference.
- 19.** The distance at which the effects of diffraction become significant.
- 20.** The speed at which the phase of a wave propagates through space.
- 22.** A surface over which the wave has a constant phase.
- 23.** Light in which the electric field oscillates in a single direction.
- 25.** The distance between adjacent bright or dark fringes in an interference pattern.
- 26.** The product of the refractive index and the geometrical path length of light.
- 27.** The amount of energy per unit volume in a wave or a field.
- 28.** Interference that occurs when waves are in phase, resulting in increased amplitude.
- 29.** The spatial variation in the intensity of light in an interference or diffraction pattern.
- 7.** The difference in the paths traveled by two waves from their sources to a point.
- 8.** A pattern formed by the superposition of two or more waves.
- 12.** A principle stating that every point on a wavefront is a source of secondary spherical wavelets.
- 13.** The angle at which light is completely polarized when reflected from a surface.
- 14.** Light of a single wavelength.
- 15.** An optical component with closely spaced lines that diffracts light into several beams.
- 18.** Light in which the electric field oscillates in multiple directions.
- 21.** A localized group of waves with different wavelengths that combine to form a wave packet.
- 24.** The speed at which the envelope of a wave packet propagates, often associated with the signal speed.