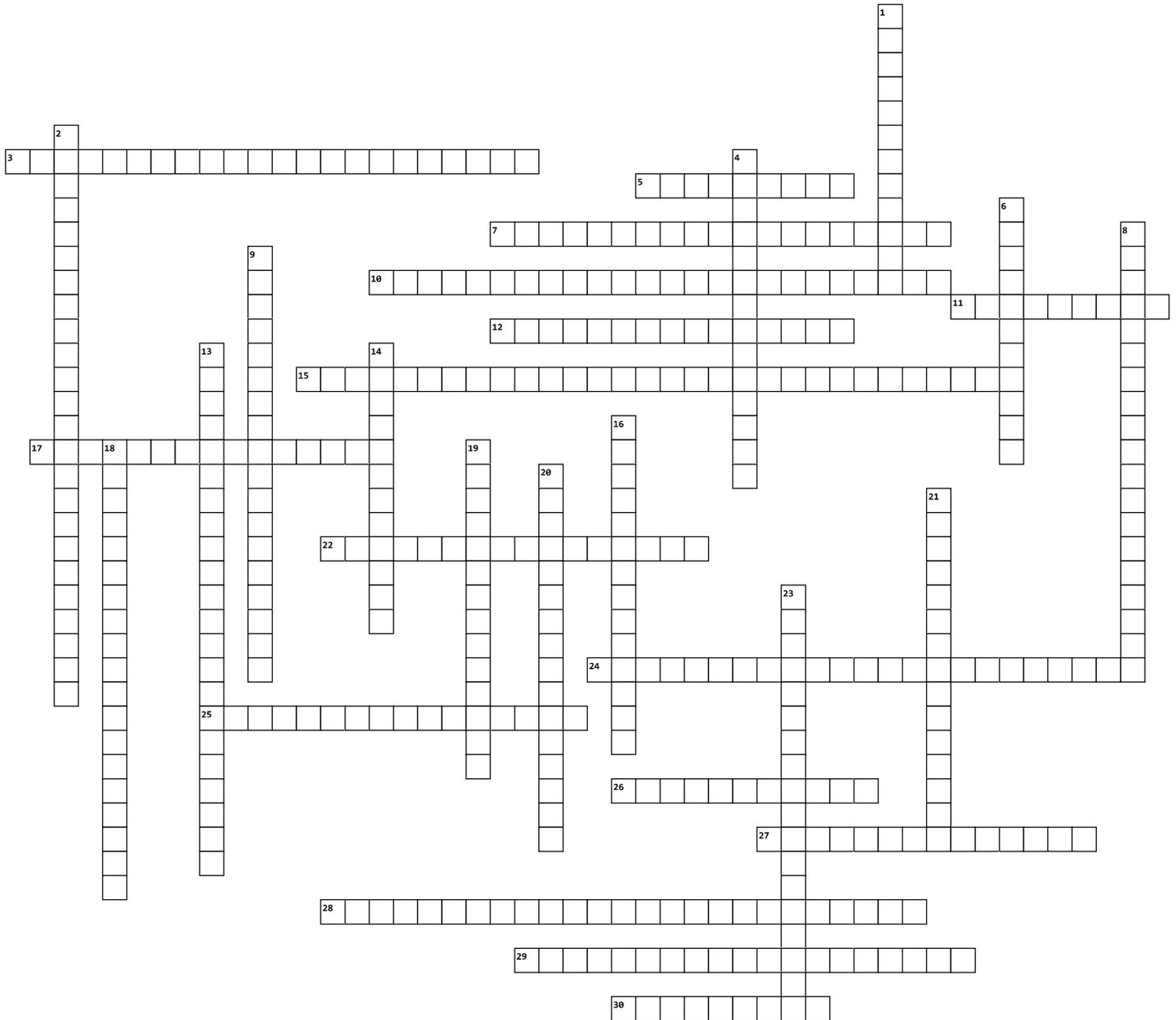


Wave optics



Across

- 3.** Interference caused by light waves reflecting off the two surfaces of a thin film.
- 5.** The property of wave sources to produce waves in constant phase relation.
- 7.** An optical component with closely spaced lines that disperses light into a spectrum.
- 10.** When two waves combine to produce a wave with reduced or zero amplitude.
- 11.** The diffraction pattern produced by a circular aperture, with a bright central spot and rings.

Down

- 1.** Restriction of the vibrations of transverse waves (like light) to one direction.
- 2.** An optical instrument used to measure the interference pattern created by splitting a beam of light.
- 4.** The alternating light and dark bands seen in interference.
- 6.** The bending of light waves around obstacles or through slits.

12. A device used to produce two coherent sources for interference experiments.

15. Demonstration of light's wave nature using interference patterns.

17. The ability of an optical instrument to distinguish two close objects as separate.

22. The angle at which light is perfectly polarized when reflected.

24. The diffraction pattern produced by light passing through a single slit.

25. A measure of how much light slows down in a medium.

26. Describes the intensity of polarized light passing through a polarizer.

27. The velocity at which the overall envelope of the wave group travels.

28. When two waves combine to produce a wave with greater amplitude.

29. Light consisting of a single wavelength or color.

30. The locus of points having the same phase of vibration.

8. Diffraction pattern observed when the source or the screen is close to the aperture.

9. Every point on a wavefront acts as a secondary source of wavelets.

13. Diffraction pattern observed when both the source and the screen are far from the aperture.

14. The phenomenon where two or more waves superimpose to form a resultant wave.

16. A pattern of concentric circles formed by the interference of light reflecting from a lens and a flat surface.

18. The product of the refractive index and the geometrical length of the path traveled by light.

19. The rate at which the phase of the wave propagates in space.

20. The difference in phase between two waves at a point.

21. The difference in the distances traveled by two light waves reaching a point.

23. A criterion used to define the resolving power of an optical system.