

Astronomy 100 -- Worksheet #9
Properties of LIGHT

- 1) Light behaves like both a _____ and a _____.
- 2) The distance between adjacent crests of a light wave is called the _____ of the light.
- 3) The number of light waves which pass you per second is known as the _____ of the light.
- 4) The distribution of light according to wavelength is known as the _____.
- 5) A particle of light is known as a(n) _____. These _____ have no _____ and they travel with a velocity called the _____.
- 6) The energy of a photon is greater if its _____ is greater.
- 7) The seven wavelength regions of the electromagnetic spectrum, ordered in terms of increasing wavelength, are _____, _____, _____, _____, _____, _____, and _____. The highest energy photons are the _____ photons. Among optical photons, the shorter wavelengths appear _____ in color, while the longer wavelengths appear _____ in color.
- 8) The Inverse Square Law of light states that the brightness of an object decreases as the _____. If a car is approaching you as you watch in the rear-view mirror, when it has moved 6 times closer to you, the headlights will appear _____ times _____ (brighter/fainter).
- 9) The fact that light bends when it travels from one medium to a medium of different density is known as _____.
- 10) The fact that shorter wavelengths are bent more than longer wavelengths is known as _____. This property leads to the formation of _____ when sunlight interacts with raindrops.
- 11) The study of the spectra of astronomical objects is known as _____.
- 12) The laws which describe the types of spectra produced under different physical conditions are known as _____'s Laws. The type of spectrum produced by a hot solid or a hot dense gas is called a(n) _____ spectrum.
- 13) The type of spectrum produced by a hot diffuse gas is called a(n) _____ spectrum.
- 14) The type of spectrum produced by a cool gas in front of a hot continuous spectrum is called a(n) _____ spectrum.
- 15) The type of spectrum produced by most stars is called a(n) _____ spectrum, be-