LIGHT WORKSHEET, WAVELENGTH, FREQUENCY and ENERGY

Name	Period
	You must show all work to receive full credit.
Useful Infor	mation You May Need:
Red	700 - 650 nm
Orange	649 - 580 nm
Yellow	579 - 575 nm
Green	574 - 490 nm
Blue	489 - 455 nm
Indigo	454 - 425 nm
Violet	424 - 400 nm
	1. Which has the greater λ blue or indigo light?
	2. Which has the greater v red or yellow light?
	3. Which has the greater energy, a photon of yellow light or a photon of green light?
	4. Which has the longer wavelength, light with a frequency of $7.32 \times 10^{14} \text{Hz}$ or light with a frequency of $6.0 \times 10^{14} \text{Hz}$?
	5. Which has higher energy, λ of 674 nm or λ 480 nm?
	6. Which has a higher frequency, orange light or indigo light?
	$_{-}$ 7. A certain red light has a wavelength of 725 nm and another red light has a frequency of 4.28 X $_{10}^{14}$ /sec. Which would have higher energy per photon?
	8. Find the color of light whose frequency is 5.21 X 10 ¹⁴ cycles/sec.
	9. What is the frequency of light if its wavelength is 5.4 X 10 ⁻⁵ см?
	10. Which would have the higher frequency, light of wavelength of 521 nm or light with a wavelength of 605 nm?
	11. Which would have the longer wavelength, light with a frequency of 4.5 X 10 ¹⁴ Hz or light with a frequency of 6.19 X 10 ¹⁴ Hz?