

Electromagnetic Spectrum

CAeMis+ry: <http://genest.weebly.com>

Stop in for help every day at lunch and Tues, Weds., & Thurs after school!

After-hours question? Email me at home: egenest@madison.k12.wi.us



ANSWERS

Name _____

Period _____

1. Write the letter and charge symbols for the following ions

a) iron(III)



b) nitride



c) oxide



2. Give the number of protons in each:

a) Ag+ 47

c) Li+ 3

b) Li 3

d) F 9

3. Write the charge of each element when it is in a compound

a) 2^{-} oxygen

d) 2^{+} zinc

b) 1^{-} bromine

e) 3^{+} aluminum

c) 1^{+} potassium

f) 2^{+} calcium

4. Give the number of protons, neutrons, and electrons in each

a) 12 p 13 n 10 e Mg^{2+} with an atomic mass number of 25

b) 12 p 13 n 12 e Mg with an atomic mass number of 25

c) 8 p 10 n 10 e O^{2-} with an atomic mass number of 18

5. Fill in the missing colors of visible light in this table of electromagnetic radiation:

Table of Electromagnetic radiation – just showing the colors of visible light

| | | | | | | |
|-----|--------|--------|-------|------|--------|--------|
| red | orange | yellow | green | blue | indigo | violet |
|-----|--------|--------|-------|------|--------|--------|

Least energy

Most energy

Answer the next two questions by marking <, =, or >.

6. The energy of a green photon

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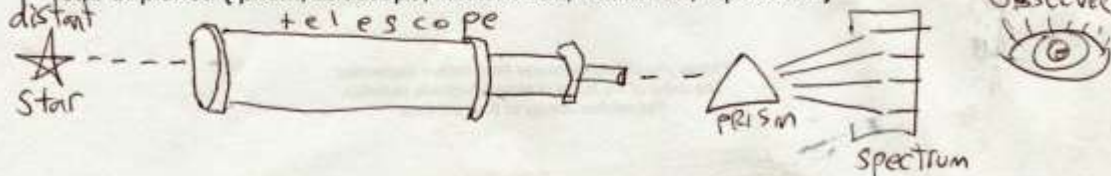
the energy of a orange photon

7. The energy of a green photon

>

The energy of radio waves

8. Sketch here all the parts of a machine that could detect which elements are in a distant star or planet. { prism, telescope, distant star, observer, spectrum }



9. First, replace the question marks with letters to fill in the spectrum of visible light colors. Then, fill in the missing types of electromagnetic radiation from the table of electromagnetic radiation

Table of Electromagnetic radiation – showing all forms, including, at the middle, the colors of visible light

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|--------------------|--------------------|------------------|---|---|---|---|---|---|---|---------------------|--------------|-----------------|
| <u>radio waves</u> | <u>Micro waves</u> | <u>infra red</u> | R | O | ? | ? | B | ? | ? | <u>Ultra violet</u> | <u>X-Ray</u> | Gamma Radiation |
| | | | | | Y | G | I | V | | | | |
| Least energy | | | | | | | | | | | | |
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