Name:_____(2pts) QUIZ #7 V1 (12 pts)

1.) What heat must be added to a sample of 14.2 grams of iron to raise the sample's temperature from 12 °C to 48 °C? Given the specific heat of iron is 0.444 J/g·°C, and using $q = m \times C_s \times \Delta T$ (2 pts)

2.) If 372 J of heat was put into a 5.0 gram sample of an unknown metal and caused a change in temperature of 11.2 °C, what is the specific heat of the unknown metal? Using $q = m \times C_s \times \Delta T$ (2 pts)

3.) What is the difference between what the specific heat capacity (C_s) is measuring and what the molar heat capacity (C_{mol}) is measuring? What are the units for each? (2 pts)

4.) A red laser pointer operates at a wavelength of 532 nm, what is the frequency of that laser light? Given the speed of light is 3.0×10^8 m/s and using $c = \nu\lambda$ (2 points)

5.) What is the energy of that green light given off by the laser? Given Planck's constant (h) is 6.626×10^{-34} J · s and $E = h\nu$ (2 pts)

Name:_____(2pts) QUIZ #7 V2 (12 pts)

1.) What heat must be added to a sample of 10.2 grams of silver to raise the sample's temperature from 18 °C to 48 °C? Given the specific heat of silver is 0.233 J/g·°C, and using $q = m \times C_s \times \Delta T$ (2 pts)

2.) If 280 J of heat was put into a 5.0 gram sample of an unknown metal and caused a change in temperature of 6.2 °C, what is the specific heat of the unknown metal? Using $q = m \times C_s \times \Delta T$ (2 pts)

3.) What is the difference between what the specific heat capacity (C_s) is measuring and what the molar heat capacity (C_{mol}) is measuring? What are the units for each? (2 pts)

4.) A red laser pointer operates at a wavelength of 645 nm, what is the frequency of that laser light? Given the speed of light is 3.0×10^8 m/s and using $c = \nu\lambda$ (2 points)

5.) What is the energy of that red light given off by the laser? Given Planck's constant (h) is 6.626×10^{-34} J · s and $E = h\nu$ (2 pts)