Class: _____ Name _____

Assignment: **scientific notation & the solar system** (r^3) $V = (r^3)(4/3)(3.14)$ Date _____

Planet	Equitorial Radius (km) (NASA data)	Equitorial Radius (km) (scientific notation)	Equatorial Radius^ 3 (km^3) (scientific notation)	Planet Volume / Earth's Volume	Comparison to Earth (scientific notation)	Comparison to Earth (standard decimal)
Sun				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Mercury				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Venus				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Earth	6378	6.378×10^3	259.45×10^9	$\frac{1086.2 \times 10^9\ km^3}{1.0832 \times 10^{12}\ km^3}$	1002.8×10^{-3}	1.0028
Earth Moon's				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Mars				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Jupiter				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Saturn				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Uranus				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Neptune				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		
Pluto				$\frac{\quad}{1.0832 \times 10^{12}\ km^3}$		

1 million (1,000,000) = 1.0×10^6; 1 billion (1,000,000,000) = 1.0×10^9 ; $10^0 = 1$

Earth's distance from sun is 149.6 million (149,600,000) = 149.6×10^6 km (or ... 1.496×10^8 km)

To mulitply, add exponents: $(1.0 \times 10^6) \times (1.0 \times 10^9) = 1.0 \times 10^{15}$

To divide, subtract exponents: $(1.0 \times 10^9)/(1.0 \times 10^6) = 1.0 \times 10^3$; $(1.0 \times 10^6)/(1.0 \times 10^9) = 1.0 \times 10^{-3}$