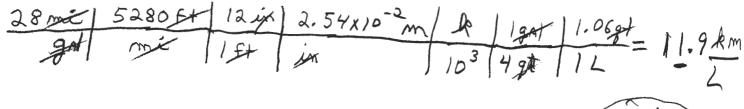
1(12 Pts). Complete the following chart, in order from left to right

Isotope	Mass Number	Protons	Neutrons	Electrons
¹⁴ N	14	7	7	7
4ºK	40	19	21	. 19
97 Zr	97	40	57	40
$^{40}\mathrm{Ca}^{2+}$	40	20	20	18

2 (5 Pts). Lead has a density of 11.3 g/cm³. What would be the mass of a rectangular block of lead measuring 2.50 cm x 3.5 cm x 6.2 cm? (Show all work to receive credit)

$$\frac{48.5 \text{ mK}}{\text{cm}^3} = 1519$$

4. (3 Pts) A car averages 28 miles per gallon. Express this in kilometers per liter. (1 L = 1.06 quarts, 4 quarts = 1 gallon, 2.54 cm = 1 inch, 12 inches = 1 foot, 5280 ft = 1 mile) (Show all work to receive credit)



12 Am

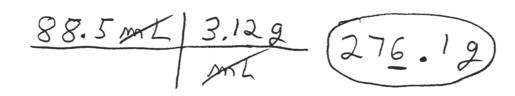


1(12 Pts). Complete the following chart, in order from left to right

Isotope	Mass Number	Protons	Neutrons	Electrons
15N	15	7	8	7
₹° Ca	40	20	20	. 20
99 Zr	99	40	59	40
87Sr ²⁺	87	38	49	36

2 (5 Pts). Lead has a density of 11.3 g/cm³. What would be the mass of a rectangular block of lead measuring 4.50 cm x 3.5 cm x 6.2 cm? (Show all work to receive credit)

3. (5 Pts). Bromine had density of 3.12 g/cm³ at 25.0 °C. Determine the mass of 88.5 mL of bromine. (Show all work to receive credit) $\frac{3}{2} = \frac{1}{2} = \frac{1}{2}$



4. (3 Pts) A car averages 18 miles per gallon. Express this in kilometers per liter. (1 L = 1.06 quarts, 4 quarts = 1 gallon, 2.54 cm = 1 inch, 12 inches = 1 foot, 5280 ft = 1 mile) (Show all work to receive credit)

18 mil 5280 ft 12 jk 2.54 x 10 2 m R 1 got 1.06 gt = 7.7 km got 1 mil 1 sk / 103 4 gts 1 L