

Circle the best answer to each of the following questions (30 minutes)

1 in. = 2.54 cm (exactly) 1 mile = 5280 ft = 1.609 km	1 L = 1000 cm ³ 1 gal = 4 qt = 8 pt = 3.785 L	1 kg = 2.205 lb 1 lb = 16 oz = 453.6 g
1 cal = 4.184 J 1 Cal = 1000 cal	1 mole = 6.022 x 10 ²³ "things"	C (water) = 4.18 J/g•°C C (copper) = 0.385 J/g•°C

- 1) How many electrons does the Ru ion have in compound Ru(AsO₄)₂?
A) 44
B) 38
C) 48
D) 50
E) 40
- 2) Report the answer to this calculation with the correct significant figures: (0.45)(145.4) + (0.70)(128.4)
A) 1.5 x 10²
B) 1.6 x 10²
C) 155
D) 155.3
E) 155.31
- 3) How many μg are in 6.0 x 10⁻⁵ Mg?
A) 6.0 x 10⁻⁷ μg
B) 6.0 x 10⁵ μg
C) 6.0 x 10⁷ μg
D) 6.0 x 10⁻⁵ μg
E) 4.0 x 10⁹ μg
- 4) A sample of an unknown material has a mass of 38 g and a volume of 6.5 cm³. What is the density of the material in lb/in³?
A) 5.8 lb/in³
B) 0.033 lb/in³
C) 4.7 lb/in³
D) 0.21 lb/in³
E) 0.083 lb/in³

