Quiz 1.2 - Measurements and Numbers

Name: Kon

Question 1

Give the total number of significant figures and the position of the least significant digit in each quantity"

1.250 g 6.022 ×
$$10^{23}$$
 0.00215 L 3500 km 2.590 × 10^{-7} m 4, 10^{-3} (10^{-3} (10^{-20}) 3, 10^{-5} 2, 10^{2} 4, 10^{-3} (10^{-10})

Question 2

Give the solution to each expression with the proper number of significant figures

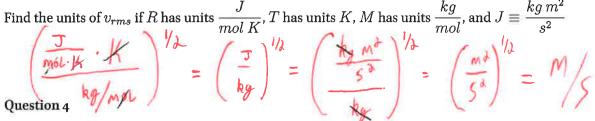
Give the solution to each expression with the proper number of significant figures
$$x = 23.14 \, cm + 4.105 \, cm \qquad x = \frac{0.12 \, mol}{1.53 \, L} \qquad x = 94 \, \mu s - 8.7 \times 10^{-5} s \qquad x = \frac{12.4 \, g + 1.94 \, g}{20.4 \, cm^3 - 3.47 \, cm^3}$$

$$2 \, 7 \cdot 10^{-6} \, 5$$

$$0.078 \, \frac{mol}{L} \qquad 7 \cdot 10^{-6} \, 5$$
Question 3

Question 3

Later in this course we will use the following equation: $v_{rms} = \sqrt{\frac{3RT}{M}}$



Complete the following table:

Decimal Quantity	Scientific Notation	Prefix Notation	
0.0045m	$4.5 \cdot 10^{-3} \mathrm{m}$	4.5 mm	
36,000,000 m	$3.6 \cdot 10^7 m$	$36\ Mm$	
0.000 000 560 n	$5.60 \times 10^{-7} m$	560 nm -or-	0.560 µm