



STARTER FOR 10!!!

1.1.1. Moles and mass

Work out the answers to the following simple calculations (1 t = 1 tonne = 1,000 kg);

1. No. of moles in 10.0 g of O_2 + the mass in g of 2.41 moles of H_2O =
(2 marks)
2. Mass in g of 0.2 moles of K_2CO_3 + mass in g of 0.5 moles of $MgCO_3$ =
(2 marks)
3. No. of moles in 12.4 t of $NaNO_3$ ÷ no. of moles in 12.4 t of $NaCl$ =
(2 marks)
4. No. of moles in 25.9 g of sodium – no. of moles in 25.9 g of sodium chloride =
(2 marks)
5. ? × molar mass of in $g\ mol^{-1}$ of calcium carbonate = no. of moles in 4.2 kg of $SiCl_4$
(2 marks)



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Chapter 1: Quantitative chemistry answers

1.1. The mole

1.1.1. Moles and maths

1. 43.7
2. 69.8
3. 0.688
4. 0.683
5. 0.25

1.1.2. Moles and concentration

a→ 2	6	5	4	9	8	1	7	d↓ 3
9	4	c→ 7	b↓ 1	3	6	8	2	5
3	1	8	7	2	e↓ 5	6	4	9
7	8	2	6	1	3	9	5	4
f↓ 1	5	4	g→ 8	7	9	2	3	6
6	3	9	5	4	2	7	8	1
4	7	6	2	5	1	3	9	8
8	2	3	9	h→ 6	4	5	1	7
5	9	1	3	8	7	i→ 4	6	2

1.1.3. Concentration and dilution

Solution A	2	9	1	1	4	0	1	1	Solution I
Solution B	1	2	6	0	4	9	6	2	Solution J
Solution C	2	6	7	4	3	5	1	1	Solution K
Solution D	5	3	2	1	2	9	0	2	Solution L
Solution E	1	0	8	9	0	5	6	3	Solution M
Solution F	2	2	1	7	3	7	2	5	Solution N
Solution G	8	4	6	1	5	2	1	2	Solution O
Solution H	6	2	4	2	8	9	3	8	Solution P