

Name : _____ Date : _____

Mole Conversion Worksheet

Answer the following questions.

1. How many moles are present in 15 grams of lithium?

2. How much does 2.4 moles of sulfur weigh?

3. How many moles are present in 22 grams of argon?

4. How many grams are in 238 moles of arsenic?

5. How many grams are in 0.02 moles of beryllium iodide, BeI_2 ?

Mole Conversion Worksheet

Answers

1. How many moles are present in 15 grams of lithium?

2.161 moles

1 mole of lithium weighs 6.941 g/mol

So, 15 grams of lithium contains $15/6.941 = 2.161$ moles

2. How much does 2.4 moles of sulfur weigh?

76.8 grams

1 mole of sulfur weighs 32 g/mol

2.4 moles of sulfur weighs (2.4×32) grams = 76.8 grams

3. How many moles are present in 22 grams of argon?

0.55 moles

Molar mass of argon is 40 g/mol

22 grams of argon represents = $22/40$ moles = 0.55 moles

4. How many grams are in 238 moles of arsenic?

17800 grams

1 mole of arsenic weighs 74.9216 grams

238 moles of arsenic weighs 17831.3 grams ~ 17800 grams

5. How many grams are in 0.02 moles of beryllium iodide, BeI_2 ?

The average atomic mass of chlorine

= $(35 \times 0.7553) + (37 \times 0.2447)$

= $26.44 + 9.054$

= 35.494