Moles Worksheet

Answer the following questions.

1. How many moles are present in 40 grams of water?

2. How many atoms are present in 14 moles of cadmium?

3. How many molecules are in 48 grams of NaOH?

4. How many grams are in 3.7 moles of Na_2O?

5. How many molecules in 3.72 moles of sulfur dioxide?

6. How many atoms are in 90.43 moles of copper?

Moles Worksheet

1. How many moles are present in 40 grams of water?

   2.22 moles

   Number of moles present in 40 grams of water = 40/18 moles = 2.22 moles

2. How many atoms are present in 14 moles of cadmium?

   8.4×10^{24} atoms

   Number of atoms present in 14 moles of cadmium = $14 \times 6.023 \times 10^{23}$ = 8.4×10^{24} atoms

3. How many molecules are in 48 grams of NaOH?

   7.23×10^{23} molecules

   Number of molecules present in 48 grams of NaOH = $(48/40) \times 6.023 \times 10^{23}$ = 7.23×10^{23} molecules

4. How many grams are in 3.7 moles of Na_2O?

   229 grams

   Grams present in 3.7 moles of Na_2O = 3.7×62 grams = 229 grams

5. How many molecules in 3.72 moles of sulfur dioxide?

   2.24×10^{24} molecules

   Number of molecules present in 3.72 moles of SO_2 = $3.72 \times 6.023 \times 10^{23}$ = 2.24×10^{24} molecules

6. How many atoms are in 90.43 moles of copper?

   5.44×10^{25} atoms

   Number of atoms present in 90.43 moles of copper = $90.43 \times 6.023 \times 10^{23}$ = 5.44×10^{25} atoms