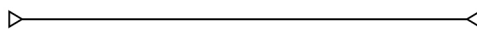


# Moles Worksheet



Answer the following.

1. How many moles are in 40 grams of water?
2. How many atoms are in 40 grams of calcium?
3. How many moles are in 88.88 grams of calcium?
4. What is the percent hydrogen in water?
5. How many moles are in 9.8 grams of calcium?
6. How many atoms are in 5.55 moles of silver?
7. What is the molar mass of sodium carbonate?
8. How many grams is 1.25 moles of potassium bromide?

# Moles Worksheet

## Answers

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

The number of moles present in 40 grams of water =  $40\text{g H}_2\text{O}/18\text{g H}_2\text{O} = 2.22$  moles

2. How many atoms are in 40 grams of calcium?

$6.023 \times 10^{23}$

This is because 40 grams of calcium is the weight of a single mole of calcium and a mole of calcium consists of  $6.023 \times 10^{23}$ .

3. How many moles are in 88.88 grams of calcium?

The number of moles present in 88.88 grams of calcium =  $88.88\text{g Ca}/40\text{g Ca} = 2.22$  moles

4. What is the percent hydrogen in water?

There are two hydrogen atoms in water (2 grams) and the molar mass of  $\text{H}_2\text{O} = 18$  grams

So % H in  $\text{H}_2\text{O}$  is =  $(2/18) \times 100\% = 11.11\%$

5. How many moles are in 9.8 grams of calcium?

The number of moles present in 9.8 grams of calcium =  $9.8\text{g Ca}/40\text{g Ca} = 0.245$  moles

6. How many atoms are in 5.55 moles of silver?

The number of atoms present in 5.55 moles of silver =  $5.55 \times 6.023 \times 10^{23} = 3.3 \times 10^{24}$

7. What is the molar mass of sodium carbonate?

The molar mass of  $\text{Na}_2\text{CO}_3 = 2 \times \text{molar mass of Na} + \text{molar mass of C} + 3 \times \text{molar mass of O} = 2 \times 23 + 12 + 3 \times 16 = 46 + 12 + 48 = 106\text{g/mol}$

8. How many grams is 1.25 moles of potassium bromide?

The weight of 1.25 moles of KBr in grams =  $1.25 \times 119 \text{ grams} = 148.75 \text{ grams}$