The Mole, Balancing Equations, and Molar Mass — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The molar mass of H_2O is 18 grams per mole. A sample of 36 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **The molar mass of CO_2 is 44 grams per mole. A sample of 88 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **The molar mass of NaCl is 58.5 grams per mole. A sample of 117 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The molar mass of O_2 is 32 grams per mole. A sample of 64 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **The molar mass of CH_4 is 16 grams per mole. A sample of 32 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The molar mass of H_2O is 18 grams per mole. A sample of 3 moles has a mass, in grams, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **The molar mass of CO_2 is 44 grams per mole. A sample of 2 moles has a mass, in grams, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **The molar mass of O_2 is 32 grams per mole. A sample of 5 moles has a mass, in grams, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **The molar mass of CH_4 is 16 grams per mole. A sample of 4 moles has a mass, in grams, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **One mole of any substance contains about**

A 6.02×10^{23} particles

B 6.02 particles

C 100 particles

D 1000 particles

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11 **The molar mass of a substance is its mass per**

- A gram only
- B mole
- C litre
- D atom

Understand It with Pulse | Flag a mistake

12 **To balance a chemical equation, you change the**

- A subscripts
- B element symbols
- C coefficients
- D state symbols

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13 **A balanced equation has the same number of each type of atom on**

- A the left only
- B the right only
- C neither side
- D both sides

Understand It with Pulse | Flag a mistake

14 **The coefficient 2 in front of H_2O means**

- A two molecules of water
- B two atoms of hydrogen only
- C two atoms of oxygen
- D water^2

Understand It with Pulse | Flag a mistake

15 **In the equation $2H_2$ plus O_2 gives $2H_2O$, the mole ratio of H_2 to O_2 is**

A 1 to 2

B 2 to 1

C 1 to 1

D 2 to 2

Understand It with Pulse | Flag a mistake

16 **Conservation of mass means mass is neither created nor destroyed in a**

A physical change only

B nuclear reaction only

C chemical reaction

D mixture

Understand It with Pulse | Flag a mistake

17 **The molar mass of water, H_2O, is about**

- **A** 10 grams per mole
- **B** 32 grams per mole
- **C** 44 grams per mole
- **D** 18 grams per mole

Understand It with Pulse | Flag a mistake

18 **The equation H_2 plus Cl_2 gives 2HCl is balanced. The coefficient in front of HCl is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **The molar mass of $CaCO_3$ is 100 grams per mole. A sample of 200 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **The molar mass of MgO is 40 grams per mole. A sample of 80 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **The molar mass of $CaCO_3$ is 100 grams per mole. A sample of 3 moles has a mass, in grams, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **The molar mass of MgO is 40 grams per mole. A sample of 2 moles has a mass, in grams, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **The equation 2Na plus Cl_2 gives 2NaCl is balanced. The coefficient in front of NaCl is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **The equation CH_4 plus $2O_2$ gives CO_2 plus $2H_2O$ is balanced. The coefficient in front of O_2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The molar mass of HCl is 36.5 grams per mole. A sample of 73 grams contains, in moles**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	2	**10.**	A	**19.**	2
2.	2	**11.**	B	**20.**	2
3.	2	**12.**	C	**21.**	300
4.	2	**13.**	D	**22.**	80
5.	2	**14.**	A	**23.**	2
6.	54	**15.**	B	**24.**	2
7.	88	**16.**	C	**25.**	2
8.	160	**17.**	D		
9.	64	**18.**	2		

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