

This file was downloaded from the American Curriculum website



الملف Worksheet about Chemical calculations

[Almanahj Website](#) → [American curriculum](#) → [11th Grade](#) → [Chemistry](#) → [Term 1](#) → [The file](#)

More files for 11th Grade , Subject Chemistry , Term 1

Worksheet about chemistry alkali and alkaline earth metals	1
Worksheet about chemistry periodic classification	2
Worksheet about chemistry hydrogen	3
Worksheet about Environmental chemistry	4

Basic Concepts of Chemistry and Chemical Calculations

Choose the best answer.

- 40 ml of methane is completely burnt using 80 ml of oxygen at room temperature. The volume of gas left after cooling to room temperature is
(a) 40 ml CO₂ gas (b) 40 ml CO₂ gas and 80 ml H₂O gas
(c) 60 ml CO₂ gas and 60 ml H₂O gas (d) 120 ml CO₂ gas
- An element X has the following isotopic composition ²⁰⁰X = 90 %, ¹⁹⁹X = 8 % and ²⁰²X = 2 %. The weighted average atomic mass of the element X is closest to
(a) 201 u (b) 202 u
(c) 199 u (d) 200 u
- Assertion : Two mole of glucose contains 12.044×10^{23} molecules of glucose
Reason : Total number of entities present in one mole of any substance is equal to 6.02×10^{22}
(a) both assertion and reason are true and the reason is the correct explanation of assertion
(b) both assertion and reason are true but reason is not the correct explanation of assertion
(c) assertion is true but reason is false
(d) both assertion and reason are false
- Carbon forms two oxides, namely carbon monoxide and carbon dioxide. The equivalent mass of which element remains constant?
(a) Carbon (b) oxygen
(c) both carbon and oxygen (d) neither carbon nor oxygen
- The equivalent mass of a trivalent metal element is 9 g eq⁻¹ the molar mass of its anhydrous oxide is
(a) 102 g (b) 27 g (c) 270 g (d) 78 g

6. The number of water molecules in a drop of water weighing 0.018 g is
 (a) 6.022×10^{26} (b) 6.022×10^{23}
 (c) 6.022×10^{20} (d) 9.9×10^{22}
7. 1 g of an impure sample of magnesium carbonate (containing no thermally decomposable impurities) on complete thermal decomposition gave 0.44 g of carbon dioxide gas. The percentage of impurity in the sample is
 (a) 0 % (b) 4.4 % (c) 16 % (d) 8.4 %
8. When 6.3 g of sodium bicarbonate is added to 30 g of acetic acid solution, the residual solution is found to weigh 33 g. The number of moles of carbon dioxide released in the reaction is
 (a) 3 (b) 0.75 (c) 0.075 (d) 0.3
9. When 22.4 litres of H_2 (g) is mixed with 11.2 litres of Cl_2 (g), each at 273 K at 1 atm the moles of HCl (g), formed is equal to
 (a) 2 moles of HCl (g) (b) 0.5 moles of HCl (g)
 (c) 1.5 moles of HCl (g) (d) 1 moles of HCl (g)
10. Hot concentrated sulphuric acid is a moderately strong oxidising agent. Which of the following reactions does not show oxidising behaviour?
 (a) $\text{Cu} + 2\text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{SO}_2 + 2\text{H}_2\text{O}$
 (b) $\text{C} + 2\text{H}_2\text{SO}_4 \rightarrow \text{CO}_2 + 2\text{SO}_2 + 2\text{H}_2\text{O}$
 (c) $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{HCl}$
 (d) none of the above
11. Choose the disproportionation reaction among the following redox reactions.
 (a) $3\text{Mg} (\text{s}) + \text{N}_2 (\text{g}) \rightarrow \text{Mg}_3\text{N}_2 (\text{s})$
 (b) $\text{P}_4 (\text{s}) + 3 \text{NaOH} + 3\text{H}_2\text{O} \rightarrow \text{PH}_3 (\text{g}) + 3\text{NaH}_2\text{PO}_2 (\text{aq})$
 (c) $\text{Cl}_2 (\text{g}) + 2\text{KI} (\text{aq}) \rightarrow 2\text{KCl} (\text{aq}) + \text{I}_2$
 (d) $\text{Cr}_2\text{O}_3 (\text{s}) + 2\text{Al} (\text{s}) \rightarrow \text{Al}_2\text{O}_3 (\text{s}) + 2\text{Cr} (\text{s})$

19. Two 22.4 litre containers A and B contains 8 g of O_2 and 8 g of SO_2 respectively at 273 K and 1 atm pressure, then
- (a) Number of molecules in A and B are same
 - (b) Number of molecules in B is more than that in A.
 - (c) The ratio between the number of molecules in A to number of molecules in B is 2:1
 - (d) Number of molecules in B is three times greater than the number of molecules in A.
20. What is the mass of precipitate formed when 50 ml of 8.5 % solution of $AgNO_3$ is mixed with 100 ml of 1.865 % potassium chloride solution?
- (a) 3.59 g
 - (b) 7 g
 - (c) 14 g
 - (d) 28 g
21. The mass of a gas that occupies a volume of 612.5 ml at room temperature and pressure ($25^{\circ}C$ and 1 atm pressure) is 1.1g. The molar mass of the gas is
- (a) 66.25 $g\ mol^{-1}$
 - (b) 44 $g\ mol^{-1}$
 - (c) 24.5 $g\ mol^{-1}$
 - (d) 662.5 $g\ mol^{-1}$
22. Which of the following contain same number of carbon atoms as in 6 g of carbon-12.
- (a) 7.5 g ethane
 - (b) 8 g methane
 - (c) both (a) and (b)
 - (d) none of these
23. Which of the following compound(s) has /have percentage of carbon same as that in ethylene (C_2H_4)
- (a) propene
 - (b) ethyne
 - (c) benzene
 - (d) ethane
24. Which of the following is/are true with respect to carbon -12.
- (a) relative atomic mass is 12 u
 - (b) oxidation number of carbon is +4 in all its compounds.
 - (c) 1 mole of carbon-12 contain 6.022×10^{22} carbon atoms.
 - (d) all of these
25. Which one of the following is used as a standard for atomic mass.
- (a) ${}_6C^{12}$
 - (b) ${}_7C^{12}$
 - (c) ${}_6C^{13}$
 - (d) ${}_6C^{14}$