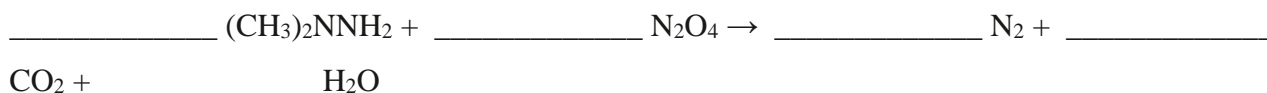


Name _____ Date _____

End of Chapter 16 test

This test and its sample answers have been written by the authors. IB may award marks differently.

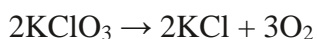
- 1 When the following equation is balanced, what is the sum of all the coefficients?



- A 9
B 11
C 12
D 16
- 2 The complete combustion of hexene, C_6H_{12} , gives carbon dioxide and water as products. Write a balanced equation for this combustion reaction. What is the sum of the coefficients?

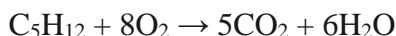
- A 13
B 44
C 19
D 22

- 3 In the decomposition of KClO_3 , 9.6 mol of oxygen were produced. How many moles of KCl would be produced?



- A 6.40
B 3.20
C 9.6
D 19.2

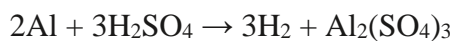
- 4 How many moles of water will be produced from the complete combustion of 28.8 g of C_5H_{12} ?



- A 0.4
B 1.2
C 2.4
D 6.0

- 5 How many grams of oxygen are required to burn 28.8 g of C_5H_{12} ?
- A 3.2
B 51.2
C 102.4
D 76.8
- 6 Hydrogen and chlorine react according to the following equation:
 $\text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{HCl}(\text{g})$
 How much $\text{HCl}(\text{g})$ will be produced when 200 cm^3 of H_2 and 150 cm^3 of Cl_2 are reacted?
- A 350 cm^3
B 150 cm^3
C 200 cm^3
D 300 cm^3
- 7 Using the following equation, if there are 2000 g of each reactant available, which reactant is the limiting reactant?
 $\text{Ca}_3(\text{PO}_4)_2 + 3\text{SiO}_2 + 5\text{C} + 5\text{O}_2 + 3\text{H}_2\text{O} \rightarrow 3\text{CaSiO}_3 + 5\text{CO}_2 + 2\text{H}_3\text{PO}_4$
- A C
B $\text{Ca}_3(\text{PO}_4)_2$
C O_2
D H_2O
- 8 If 50.00 cm^3 of NaOH solution are required for the neutralisation of a 25.00 cm^3 sample of 0.20 mol dm^{-3} H_2SO_4 , what is the molarity of NaOH ?
- A 0.15 mol dm^{-3}
B 0.20 mol dm^{-3}
C 0.10 mol dm^{-3}
D 0.40 mol dm^{-3}
- 9 25.00 cm^3 of 1.0 mol dm^{-3} sodium hydroxide react with 0.5 mol dm^{-3} H_3PO_4 .
 The volume of H_3PO_4 , in cm^3 , required for neutralisation is
- A 16.7 cm^3
B 25 cm^3
C 50 cm^3
D 33.3 cm^3 .

- 10** A student adds 18.0 g of Al to excess sulfuric acid and collects 1.70 g of hydrogen. Using the following equation, work out the percentage yield of H₂:



- A** 85%
- B** 100%
- C** 66.6%
- D** 75%

END OF TEST