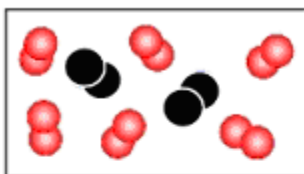
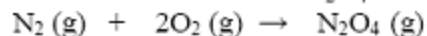


Problems discussed in the videos:

Video (1)

The illustration below represents a mixture of nitrogen (black) and oxygen (grey) molecules. The molecules shown react to form N_2O_4 according to the equation



- 1) Which of the following amounts is conserved in the reaction?
 - A) mass
 - B) number of moles
 - C) number of molecules
 - D) atoms
 - E) both A) and D)

- 2) The limiting reagent is
 - A) N_2
 - B) O_2
 - C) N_2O_4
 - D) there is no limiting reagent

- 3) The number of N_2O_4 molecules formed is _____.
 - A) 2
 - B) 4
 - C) 6
 - D) 8

Video (2)

8.) A 54 g sample of aluminum reacts completely with 48.0 g of oxygen gas. Which is the formula of the oxide produced?

- A) Al_2O_3 B) AlO C) AlO_2 D) Al_4O_3 E) Al_3O_5

Video (3)

10) The element indium has two naturally occurring isotopes. The natural abundances and isotopic masses are

<u>Isotope</u>	<u>% Abundance</u>	<u>Isotopic Mass</u>
^{113}In	4.290	112.904
^{115}In	95.71	114.904

The atomic mass of naturally occurring indium is _____.

- A) 112.990
- B) 113.582
- C) 113.904
- D) 114.582
- E) 114.818

Video (4)

4.) What volume (in L) does the reaction mixture occupy after the reaction of 10 L of Cl atoms form Cl_2 at constant temperature and pressure?

- A) 1 B) 5 C) 10 D) 15 E) 20

Videos (5) – (6)

10.) A sample of a mixture containing only sodium chloride and potassium chloride has a mass of 4.00g. When this sample is dissolved in water and excess silver nitrate is added, a white precipitate (silver chloride, AgCl) forms. After filtration and drying, this precipitate has a mass of 8.5904 g. What is the mass percent of sodium chloride in the mixture?

- A) 60.5 B) 65.3 C) 39.5 D) 57.5 E) 42.5

Videos (7) – (8)

A sample of a mixture containing only CuO and Cu_2O has a mass of 1.512g. When this sample is reacted with excess hydrogen gas, 1.275g of copper metal is formed. What is the mass percent of CuO and Cu_2O in the original mixture?