

WS 4.3 STOICHIOMETRY (part 1)*Show all work using dimensional analysis!*a) How many moles of sodium (Na) would be needed to react with 3.82 moles of oxygen (O₂)?

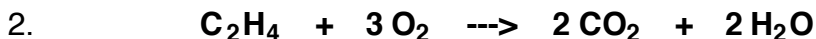
Ans _____

b) How many moles of Na₂O can be produced from 13.5 moles Na?

Ans _____

c) How many moles of O₂ are needed to produce 34.7 g of Na₂O?

Ans _____

a) When 0.624 moles of O₂ are reacted, how many moles of carbon dioxide are produced?

Ans _____

b) How many grams of C₂H₄ are needed to produce 3.7 moles of water?

Ans _____

c) how many grams of O₂ are needed to react with 2.56 g of C₂H₄?

Ans _____

a) When 62.0 g of fluorine are reacted, how many moles of NF₃ will be formed?
(don't forget fluorine is diatomic)

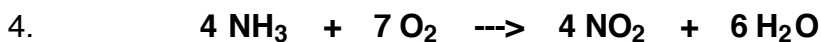
Ans _____

b) How many molecules of N₂ are needed to produce 2.85 g of NF₃?

Ans _____

c) 3.54 g of nitrogen trifluoride will form from how many grams of fluorine?

Ans _____

a) What mass of NO₂ can be produced from 3.56 x 10²² molecules of oxygen?

Ans _____

b) 13.8 g of NH₃ would be able to produce how many moles of H₂O?

Ans _____

c) How many grams of O₂ are needed to produce 15.5 g of H₂O?

Ans _____

Ans (IRO+1): 0.280 0.416 1.09 1.22 1.55 2.84 6.75 8.78 15.3 22.4 32.1 52 1.21x10²²**Units (IRO+1):** mol mol mol mol mol mol g g g g g molecules