

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Mole Problems Worksheet

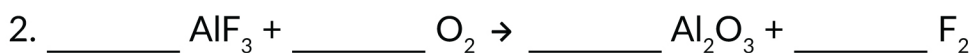
Balance the following equations and answer the respective questions.



(a) 2 moles of NO will react with \_\_\_\_\_ mole(s) of O<sub>2</sub> to produce \_\_\_\_\_ mole(s) of NO<sub>2</sub>.

(b) \_\_\_\_\_ moles NO<sub>2</sub> = 3.6 moles O<sub>2</sub> × (2 moles of NO<sub>2</sub>/ 1 mole of O<sub>2</sub>)

(c) Approximately \_\_\_\_\_ mol NO is required to produce 4.67 mol NO<sub>2</sub>



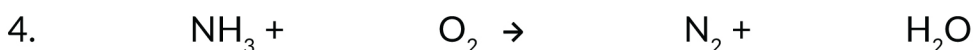
(a) 20 moles of AlF<sub>3</sub> will produce \_\_\_\_\_ moles of F<sub>2</sub>.

(b) \_\_\_\_\_ moles of AlF<sub>3</sub> will react with 0.6 moles of O<sub>2</sub>.



(a) \_\_\_\_\_ moles of oxygen gas react with \_\_\_\_\_ moles of iron to produce \_\_\_\_\_ moles of iron (III) oxide.

(b) \_\_\_\_\_ moles of O<sub>2</sub> are required to produce 3.0 moles of iron (III) oxide.



(a) 20 moles of NH<sub>3</sub> are needed to produce \_\_\_\_\_ moles of H<sub>2</sub>O.

(b) \_\_\_\_\_ mol N<sub>2</sub> is produced from 3.5 mol O<sub>2</sub> in this reaction.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Mole Problems Worksheet

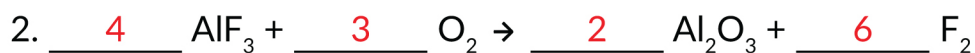
### Answers



(a) 2 moles of NO will react with 1 mole(s) of O<sub>2</sub> to produce 2 mole(s) of NO<sub>2</sub>.

(b) 7.2 moles NO<sub>2</sub> = 3.6 moles O<sub>2</sub> × (2 moles of NO<sub>2</sub>/ 1 mole of O<sub>2</sub>)

(c) Approximately 4.67 mol NO is required to produce 4.67 mol NO<sub>2</sub>



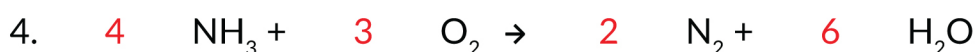
(a) 20 moles of AlF<sub>3</sub> will produce 30 moles of F<sub>2</sub>.

(b) 0.8 moles of AlF<sub>3</sub> will react with 0.6 moles of O<sub>2</sub>.



(a) 3 moles of oxygen gas react with 4 moles of iron to produce 2 moles of iron (III) oxide.

(b) 4.5 moles of O<sub>2</sub> are required to produce 3.0 moles of iron (III) oxide.



(a) 20 moles of NH<sub>3</sub> are needed to produce 30 moles of H<sub>2</sub>O.

(b) 2.3 mol N<sub>2</sub> is produced from 3.5 mol O<sub>2</sub> in this reaction.