

Name : _____ Date : _____

Acids and Bases Worksheet

Part A. Classify as an acid or a base.

- 1 Taste bitter _____
- 2 Taste sour _____
- 3 Feels slimy or slippery _____
- 4 Turns litmus paper blue _____
- 5 Turns litmus paper red _____
- 6 Gives off hydrogen gas when it reacts with some metals _____

Part B. Identify each of the following as an Arrhenius acid (A), Arrhenius base (B), or salt (S).

- i. NaCl _____ ii. KOH _____ iii. HCl _____ iv. Mg(OH)₂ _____
v. MgCl₂ _____ vi. H₂SO₄ _____

Part C. Balance the following acid-base reactions:

- i. _____ HBr + _____ NaOH → _____ NaBr + _____ H₂O
- ii. _____ H₂SO₄ + _____ KOH → _____ K₂SO₄ + _____ H₂O
- iii. _____ HCl + _____ Ca(OH)₂ → _____ CaCl₂ + _____ H₂O
- iv. _____ Fe(OH)₃ + _____ H₂SO₄ → _____ Fe₂(SO₄)₃ + _____ H₂O

Part D. Answer the following:

- i. What is the correct formula for nitric acid? _____
- ii. What is the correct formula for hydrobromic acid? _____
- iii. What is the correct name for H₃PO₃? _____
- iv. What is the correct name for HNO₂? _____

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Answers

- 1 Taste bitter Base
- 2 Taste sour Acid
- 3 Feels slimy or slippery Base
- 4 Turns litmus paper blue Base
- 5 Turns litmus paper red Acid
- 6 Gives off hydrogen gas when it reacts with some metals Acid

i. NaCl S ii. KOH B iii. HCl A iv. Mg(OH)₂ B

v. MgCl₂ S vi. H₂SO₄ A

i. HBr + NaOH → NaBr + H₂O

ii. H₂SO₄ + 2 KOH → K₂SO₄ + 2 H₂O

iii. 2 HCl + Ca(OH)₂ → CaCl₂ + 2 H₂O

iv. 2 Fe(OH)₃ + 3 H₂SO₄ → Fe₂(SO₄)₃ + 6 H₂O

i. What is the correct formula for nitric acid? HNO₃

ii. What is the correct formula for hydrobromic acid? HBr

iii. What is the correct name for H₃PO₃? Phosphorous acid

iv. What is the correct name for HNO₂? Nitrous acid