

Unit 04: Chemical Formulas and Equations

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1. Unit 04: Chemical Formulas and Equations

4. Chapter: Unit 04: Chemical Formulas and Equations

1. Unit 04: Chemical Formulas and Equations Questions

4.1.1. Alanine, one of the essential amino acids, has three carbon atoms, ...

Author: Joanna Smithback

Alanine, one of the essential amino acids, has three carbon atoms, seven hydrogen atoms, two oxygen atoms, and one nitrogen atom per molecule. How is its formula written?

Please choose only one answer:

- $C_3H_7NO_2$
- $Ca_3H_7NO_2$
- $C_3H_7NeO_2$
- $CHNO_2$

Check the answer of this question online at QuizOver.com:

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4.1.2. Boron forms a series of hydrides. If you isolate a new hydride that...

Author: Joanna Smithback

Boron forms a series of hydrides. If you isolate a new hydride that is 81.1% B, which of the following would be a possible molecular formula of the compound?

Please choose only one answer:

- B_2H_6
- B_3H_9
- B_4H_{10}
- $B_{10}H_{14}$

Check the answer of this question online at [QuizOver.com](http://www.quizover.com):

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4.1.3. How many moles are contained in 0.206 g of potassium sulfate?

Author: Joanna Smithback

How many moles are contained in 0.206 g of potassium sulfate?

Please choose only one answer:

- 1.63×10^{-3} mol
- 846 mol
- 1.52×10^{-3} mol
- 1.18×10^{-3} mol

Check the answer of this question online at QuizOver.com:

Question: [How many moles are contained in 0.206 g Joanna Smithback @Saylor](#)

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4.1.4. How many moles are contained in 13.8 g of $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$?

Author: Joanna Smithback

How many moles are contained in 13.8 g of $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$?

Please choose only one answer:

- 17.7 mol
- 0.0565 mol
- 0.0610 mol
- 0.0663 mol

Check the answer of this question online at QuizOver.com:

Question: [How many moles are contained in 13.8 g of Joanna Smithback @Saylor](#)

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4.1.5. How many moles are there in 10.0 g of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$?

Author: Joanna Smithback

How many moles are there in 10.0 g of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$?

Please choose only one answer:

- 0.0401 mol
- 0.0627 mol
- 25.0 mol
- 0.0563 mol

Check the answer of this question online at QuizOver.com:

Question: [How many moles are there in 10.0 g of \$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}\$ Joanna Smithback @Saylor](#)

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4.1.6. The compound $\text{HSCH}_2\text{CHNH}_2\text{COOH}$ is the amino acid...

Author: Joanna Smithback

The compound $\text{HSCH}_2\text{CHNH}_2\text{COOH}$ is the amino acid cysteine. How many H atoms are there in 0.150 g of cysteine?

Please choose only one answer:

- 7.47×10^{20} atoms
- 6.02×10^{23} atoms
- 5.22×10^{21} atoms
- 2.09×10^{22} atoms

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4.1.7. The density of liquid benzene, C_6H_6 , is 0.879...

Author: Joanna Smithback

The density of liquid benzene, C_6H_6 , is 0.879 g/cm³ at 15°C. How many moles are there in 36.5 mL of benzene at 15°C?

Please choose only one answer:

- 2.43 mol
- 0.467 mol
- 0.411 mol
- 0.532 mol

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4.1.8. What is the correct formula for iron (II) sulfate?

Author: Joanna Smithback

What is the correct formula for iron (II) sulfate?

Please choose only one answer:

- $\text{Fe}_2(\text{SO}_3)_3$
- $\text{Fe}_2(\text{SO}_4)_3$
- FeSO_4
- $\text{Fe}_3(\text{SO}_4)_2$

Check the answer of this question online at QuizOver.com:

Question: [What is the correct formula for iron II Joanna Smithback @Saylor](#)

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4.1.9. What is the correct name for NO₂?

Author: Joanna Smithback

What is the correct name for NO₂?

Please choose only one answer:

- dinitrogen oxide
- nitrogen oxide
- nitrogen dioxide
- nitroxide

Check the answer of this question online at QuizOver.com:

Question: [What is the correct name for NO sub 2 Joanna Smithback @Saylor General](#)

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4.1.10. What is the molar mass of ammonium carbonate?

Author: Joanna Smithback

What is the molar mass of ammonium carbonate?

Please choose only one answer:

- 96.09 g/mol
- 88.05 g/mol
- 78.05 g/mol
- 112.09 g/mol

Check the answer of this question online at QuizOver.com:

Question: [What is the molar mass of ammonium carbonate Joanna @Saylor Foundat](#)

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4.1.11. What is the molar mass of disulfur decafluoride?

Author: Joanna Smithback

What is the molar mass of disulfur decafluoride?

Please choose only one answer:

- 127.05 g/mol
- 358.60 g/mol
- 222.04 g/mol
- 254.10 g/mol

Check the answer of this question online at QuizOver.com:

Question: [What is the molar mass of disulfur Joanna Smithback @Saylor Foundat](#)

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4.1.12. What is the molar mass of hydrazine, N_2H_4 ?

Author: Joanna Smithback

What is the molar mass of hydrazine, N_2H_4 ?

Please choose only one answer:

- 4.08 g/mol
- 28.00 g/mol
- 16.03 g/mol
- 32.05 g/mol

Check the answer of this question online at QuizOver.com:

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4.1.13. Which combination of ion name and formula is correct?

Author: Joanna Smithback

Which combination of ion name and formula is correct?

Please choose only one answer:

- Nitrite, NO_2^-
- Sulfate, SO_3^{2-}
- Cyanide, C_2N_3^-
- Permanganate, MnO_3^-

Check the answer of this question online at QuizOver.com:

Question: [Which combination of ion name and formula Joanna Smithback @Saylor](#)

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4.1.14. Which combination of name and formula below is correct?

Author: Joanna Smithback

Which combination of name and formula below is correct?

Please choose only one answer:

- ammonia, NH
- HBr₂, hydrogen bromide
- sulfur dioxide, SO₂
- carbon monoxide, CO₂

Check the answer of this question online at QuizOver.com:

Question: [Which combination of name and formula Joanna Smithback @Saylor General](#)

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4.1.15. Which of the following accurately lists some common ions based on m...

Author: Joanna Smithback

Which of the following accurately lists some common ions based on metals?

Please choose only one answer:

- Na^+ , Ca^{2+} , Zn^{2+}
- Na^- , K^{2+} , Cu^{2+}
- Li^{2+} , Ba^{3+} , Ag^{2+}
- Fe^+ , Ba^{4+} , Al^{2+}

Check the answer of this question online at QuizOver.com:

Question: [Which of the following accurately lists Joanna Smithback @Saylor](#)

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4.1.16. Which of the following accurately lists some common ions based on G...

Author: Joanna Smithback

Which of the following accurately lists some common ions based on Group 6A elements?

Please choose only one answer:

- O^{2+} , S^{2+} , Se^{2+}
- O^{2-} , S^{2-} , Se^{2-}
- O^{2-} , N^{3-} , F^{-}
- Cl^{-} , O^{2+} , Al^{3+}

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Question: [Which of the following accurately lists Joanna Smithback @Saylor](#)

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4.1.17. Which of the following gives the ions present and their relative nu...

Author: Joanna Smithback

Which of the following gives the ions present and their relative numbers in sodium carbonate?

Please choose only one answer:

- 2 Li⁺ and 1 CO₃²⁻
- 1 Na⁺ and 1 CO₃²⁻
- 2 Na⁺ and 1 CO₃²⁻
- 1 Na⁺ and 2 CO₃²⁻

Check the answer of this question online at QuizOver.com:

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4.1.18. Which of the following gives the ions present and their relative nu...

Author: Joanna Smithback

Which of the following gives the ions present and their relative numbers in iron (III) phosphate?

Please choose only one answer:

- 3 Fe²⁺ and 2 PO₄³⁻
- 1 Fe³⁺ and 1 PO₄³⁻
- 2 Fe²⁺ and 3 PO₄³⁻
- 3 Fe³⁺ and 2 PO₄³⁻

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Question: [Which of the following gives the ions Joanna Smithback @Saylor General](#)

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