CHEMISTRY YEAR 12 - MODULE 5 - LESSON 10

Calculating Keq — Substitution & ICE Tables

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name _____

Date _____

Class _____

1. Key Ideas

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- Key facts and terms for Calculating Keq — Substitution & ICE Tables
- How the main ideas in Calculating Keq — Substitution & ICE Tables connect

2. Success Criteria

By the end, you should be able to:

- Key facts and terms for Calculating Keq — Substitution & ICE Tables
- Where this lesson fits in Module 5
- How the main ideas in Calculating Keq — Substitution & ICE Tables connect

3. Key Terms

Verification
Verification catches arithmetic mistakes before you lose marks.

Dynamic equilibrium
A state where forward and reverse reaction rates are equal.

Equilibrium constant (Keq)
The ratio of product to reactant concentrations at equilibrium.

Le Chatelier's Principle
A system at equilibrium shifts to minimise applied disturbances.

Reaction quotient (Q)
The ratio of product to reactant concentrations at any instant.

Solubility product (Ksp)
The equilibrium constant for dissolution of a sparingly soluble salt.

4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

5. Short Answer Questions

1. Explain this lesson goal in your own words: "Key facts and terms for Calculating Keq — Substitution & ICE Tables". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "Where this lesson fits in Module 5". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Calculating Keq — Substitution & ICE Tables: "How the main ideas in Calculating Keq — Substitution & ICE Tables connect".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Calculating Keq — Substitution & ICE Tables but does not use evidence or reasoning.

Improve the answer by writing a stronger response that uses accurate terminology, a relevant example and a clear explanation.

7. Multiple Choice

1. What is the best first step when answering a question about Calculating Keq — Substitution & ICE Tables?

☐ A. Identify the key concept being tested

☐ B. Write every fact from memory

☐ C. Ignore the command word

☐ D. Skip examples and evidence

2. Which answer would show stronger understanding of Calculating Keq — Substitution & ICE Tables?

☐ A. An answer with accurate terms and reasoning

☐ B. A copied definition only

☐ C. A single-word response

☐ D. An answer with no example

3. What should you do if a question asks you to explain?

☐ A. Link the idea to a reason or cause

☐ B. List unrelated facts

☐ C. Only draw a diagram

☐ D. Write the shortest possible answer

8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

SUCCESS CRITERION 1

Prove that you can: Key facts and terms for Calculating Keq — Substitution & ICE Tables

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: Where this lesson fits in Module 5

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: How the main ideas in Calculating Keq — Substitution & ICE Tables connect

BAND 5 4 MARKS

One thing I still need help with: