Mrs. A. Teacher · Example High School

Lesson plans: Grade 10 Mathematics

Subject and grade	Mathematics · Grade 10
Term / Week	Term 1 · Week 1
Date	13 Jan – 17 Jan
Topic	Exponent laws
Duration	60 min
Purpose of the lessons	• Simplify expressions using the exponent laws • Solve simple exponential equations
Resources	• Textbook, chapter 2
Introduction	Revise the meaning of a power using small numbers.
Lesson 1 Exponent laws	
Explanation	A power shows repeated multiplication. When multiplying powers with the same base, add the exponents. Example 1: Simplify $2^3 \times 2^4$ Solution: $2^3 \times 2^4 = 2^{3+4} = 2^7 = 128$ Example 2: Solve $3^x = 81$ Solution: $81 = 3^4$, so $x = 4$ Remember: $a^m \times a^n = a^{m+n}$
Learner activities	• Work through the examples in pairs
Can you? Exercise	1. Simplify $5^2 \times 5^3$ 2. Solve $2^x = 32$ 3. Simplify $(x^2)^3$
Answers	1. $5^5 = 3125$ 2. $x = 5$ 3. x^6
Consolidation	Summarise the exponent laws on the board.
Assessment	Class test next week.
Differentiation and support	Provide worked cards for learners who need support.

CAPS Lesson Plans

Mrs. A. Teacher · Example High School

Lesson plans: Grade 10 Mathematics

Subject and grade	Mathematics · Grade 10
Term / Week	Term 1 · Week 2
Date	13 Jan – 17 Jan
Topic	Exponential equations
Duration	60 min
Purpose of the lessons	• Simplify expressions using the exponent laws • Solve simple exponential equations
Resources	• Textbook, chapter 2
Introduction	Revise the meaning of a power using small numbers.
Lesson 2 Exponential equations	
Explanation	A power shows repeated multiplication. When multiplying powers with the same base, add the exponents. Example 1: Simplify $2^3 \times 2^4$ Solution: $2^3 \times 2^4 = 2^{3+4} = 2^7 = 128$ Example 2: Solve $3^x = 81$ Solution: $81 = 3^4$, so $x = 4$ Remember: $a^m \times a^n = a^{m+n}$
Learner activities	• Work through the examples in pairs
Can you? Exercise	1. Simplify $5^2 \times 5^3$ 2. Solve $2^x = 32$ 3. Simplify $(x^2)^3$
Answers	1. $5^5 = 3125$ 2. $x = 5$ 3. x^6
Consolidation	Summarise the exponent laws on the board.
Assessment	Class test next week.
Differentiation and support	Provide worked cards for learners who need support.

CAPS Lesson Plans