

HIGHLAND HIGH SCHOOL LESSON PLAN

NAME: A. Daka

DATE: 29 - 06 - 10

CLASS: 10 'O'

SUBJECT : Mathematics
PUPILS: 47

TIME: 11:50

NO.OF

TOPIC: Factorisation - Difference of Two Squares

DEPT: Mathematics

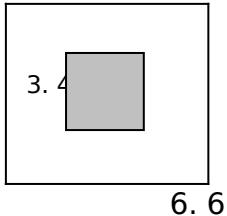
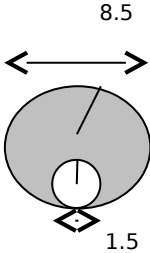
REFERENCE/AIDS: Mathematics 10 and Chalkboard

LESSON OBJECTIVES: At the end of the lesson, PSBAT:

(a) Factorise an expression like $x^2 - y^2$

(b) Use the identity $a^2 - b^2 = (a + b)(a - b)$ to evaluate expressions like $55^2 - 45^2$

TIME PHASE	CONTENT	TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	METHODOLOGY
5 - 10 minutes	Introduction DIFFERENCE OF TWO SQUARES	- Telling pupils that the expression $a^2 - b^2$ is known as Difference of Two Squares -Explaining that the factors are: $(a + b)$ and $(a - b)$, i.e. $a^2 - b^2 = (a + b)(a - b)$	Answering orally and note taking.	Question and answer.
30 minutes	Lesson Development FACTORISING DIFFERENCE OF 2 SQUARES	- Teacher explaining to pupils how to factorise expressions like (i) $a^2 - b^2$ (ii) $2a^2 - 8b^2$ (iii) $a^4 - b^4$ - Then giving Examples Factorise each of the following. 1. $x^2 - 4$ 2. $81 - y^2$ 3. $2a^2 - 8b^2$	- Pupils to participate in solving examples on the chalkboard. Solutions: (i) $a^2 - b^2 = (a + b)(a - b)$ (ii) $2a^2 - 8b^2 = 2(a^2 - 4b^2) = 2[(a + b)(a - b)]$ (iii) $a^4 - b^4 = (a^2 + b^2)(a^2 - b^2) = (a^2 + b^2)(a - b)(a + b)$ Writing notes. Answers 1. $x^2 - 4^2 = (x + 2)(x - 2)$	Teacher exposition

		4. $m^2 - 9y^2$ 5. $2x^2 - 50$ - Telling pupils that Factorising Difference of 2 Squares can be used to evaluate arithmetical expressions, e.g. Find the value of 6. $46^2 - 44^2$ 7. $55^2 - 45^2$ - Teacher showing on the chalkboard a diagram on areas of squares and rectangles and asking pupils to find areas of shaded parts. 8. The diagram below shows two squares. Calculate the area of the unshaded part 	2. $81 - y^2$ $= (9 - y)(9 + y)$ 3. $2a^2 - 8b^2$ $= 2[a^2 - 4b^2]$ $= 2[(a + 2b)(a - 2b)]$ 4. $m^2 - 9y^2$ $= (m + 3y)(m - 3y)$ 5. $2x^2 - 50$ $= 2[x^2 - 25]$ $= 2[(x + 5)(x - 5)]$ 6. $46^2 - 44^2$ $= (46 + 44)(46 - 44)$ $= 90 \times 2$ $= \mathbf{180}$ 7. $55^2 - 45^2$ $= (55 + 45)(55 - 45)$ $= 100 \times 10$ $= \mathbf{1\ 000}$ 8. $6.6^2 - 3.4^2$	
40 minutes	Assessment	- Teacher giving Class Work on the chalkboard Ex8a/b P75 Factorise each of the following. $x^2 - y^2$ $p^2 - 16$ $a^2 - 1$ $36 - 25y^2$ $3m^2 - 27$ $x^2 - 1/9$ $49 - x^2$ Evaluate $97^2 - 3^2$ $64^2 - 36^2$ - Calculate the area of the unshaded part between the 2 circles 	Doing the exercise individually in their notebooks. $3x^2 - 12y^2$	Chalkboard

EVALUATION:

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