NAME OF TEACHER: ..... **WEEK ENDING...26-05-2023.....**

NUMBER ON ROLL: ..... **SUBJECT... MATHEMATICS**

DURATION: ..... **REFERENCE...SYLLABUS(CRDD,2007),MATHS FOR JHS .....**

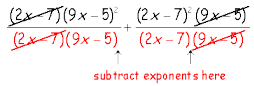
FORM.....BASIC 9..... **WEEK.....8.....**

DAY/DURATION	TOPIC/SUB-TOPIC/ASPECT	OBJECTIVES/R. P. K	TEACHER-LEARNER ACTIVITIES	T/L MATERIALS	CORE POINTS	EVALUATION AND REMARKS
MONDAY **22-05-2023**	**Topic;** Algebraic Expressions **Sub-Topic;** Finding the Coefficient of Binomials	By the end of the lesson the Pupil will be able to: I. Explain the meaning of coefficient. II. Find the coefficient of binomials	**Introduction** Review Pupils knowledge on the additions and multiplications of integers. **Activities** 1. Assist Pupils to identify the formula for finding coefficient	Cardboard, Power Point Presentation. Poster	**Finding Coefficient of Binomials;** **formula** $\binom{n}{k} = \frac{n!}{k!(n-k)!}$ **Binomial Distribution Formula in Probability** 1. n = Total number of events. 2. r (or) x = Total number of successful events. 3. p = Probability of success on a single trial. 4. $^{n}C_{r} = [n!/r!(n-r)]!$ 5. 1 – p = Probability of failure. **Examples**	**Exercise;** Identify the Monomial, Binomial, Trinomial, Polynomial, and Multinomial from the following: **a**)5pq

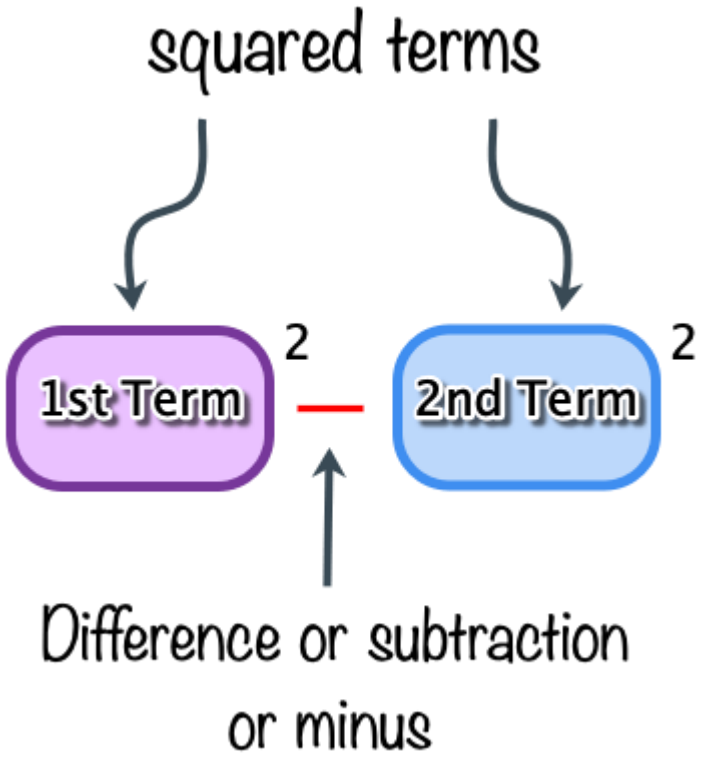
		RPK Pupils have already been taught additions and multiplications of integers.	of binomials. 2. Explain the "Pascal Triangle" and "Binomial theorem" to the Pupils. 3. Discuss with Pupils, the ways to follow to find the coefficient of binomials. 4. Demonstrate finding the coefficient of binomials using a formula. 5. Pupils in small groups practice solving		$a^2 + 2b$ is a binomial in two variables a and b. $5x^3 - 9y^2$ is a binomial in two variables x and y. $-11p - q^2$ is a binomial in two variables p and q.	b) $3b + 5c$ c) $x + y + z$ d) $a^2 + 2b$

			examples of finding coefficient of binomials. **Closure** Through questions and answers, conclude the lesson.			
WEDNESDAY **24-05-2023**	**Topic;** Algebraic Expressions **Sub-Topic;** Factoring Binomials using GCF (**Greatest Common Factor**)	**Objective** By the end of the lesson the Pupil will be able to; i. Explain "greatest common factor" ii. Factorize binomial with GCF. **RPK** Pupils can already find greatest common factors of set of numbers.	**Introduction** Review Pupils knowledge on finding for the greatest common factor of set of numbers. **Activities** 1. Guide pupils to find the binomial which is a factor in expressions. 2. Demonstrate for the Pupils to observe		**Factoring Binomial using GCF;** ○ Factor out the GCF: $5(x-2)^3 + 2x(x-2)^2$ $5(x-2)^3 + 2x(x-2)^2$ Think of this expression as having two big terms: $\underbrace{5(x-2)^3}_{\text{one term}} + \underbrace{2x(x-2)^2}_{\text{other term}}$ $\underbrace{5(x-2)^3}_{\text{one term}} + \underbrace{2x(x-2)^2}_{\text{other term}}$ $(x-2)$ $(x-2)$ The GCF is the binomial $(x-2)^2$ with the lower power: $(x-2)^2$	**Exercise;** Factorize the following; 1. $2x^2 + 6x$ 2. $2xy + 7y$ 3. $5xy + 8$ 4. $xyz + x^3$ 5. $3x^2 + 9x^3 + 12x^4$

			how to regroup term which are likely. 3. Guide pupils to regroup terms and factorize the binomial that is the common factor. **Closure** Pupils in small groups practice factorizing binomials.		Divide all the terms by the GCF $\frac{5(x-2)^3}{(x-2)^2} + \frac{2x(x-2)^2}{(x-2)^2}$ ↑ Subtract exponents he $= 5(x-2) + 2x$ $= 5x - 10 + 2x$ $= 7x - 10$ ○ Factor out the GCF: $(2x-7)(9x-5)^2 + (2x-7)^2(9x-5)$ $(2x-7)(9x-5)^2 + (2x-7)^2(9x-5)$ This expression, though longer, still has only two terms: $\underbrace{(2x-7)(9x-5)^2}_{\text{one term}} + \underbrace{(2x-7)^2(9x-5)}_{\text{other term}}$ $\underbrace{(2x-7)(9x-5)^2}_{\text{one term}} + \underbrace{(2x-7)^2(9x-5)}_{\text{other term}}$ The binomials $(2x-7)$ and $(9x-5)$ are factors in both terms. How many time are $(2x-7)$ and $(9x-5)$ they **common** to both? The GCF consists of **each** common factor to the **lower** power:	

					The GCF is $(2x-7)(9x-5)$ $(2x-7)(9x-5)$ Divide each term by the GCF and cancel fractions = to 1:  $=(9x-5)+(2x-7)$ $=11x-12$ **Rule 1:** Factoring out the Greatest Common Factor ab + ac = a(b + c) **Rule 2:** Factoring using the pattern for the differences of squares $a^2 - b^2 = (a - b)(a + b)$ **Rule 3:** Factoring using the pattern for the difference of cubes $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$ **Rule 4:** Factoring using the pattern for the sum of cubes	

					$a^3 + b^3 = (a + b)(a^2 - ab + b^2)$	
THURSDAY **25-05-2023**	**Topic;** Algebraic Expressions **Sub-Topic;** Factoring Binomials using difference of squares	**Objective** By the end of the lesson the Pupil will be able to; Factorize binomials using difference of squares. **RPK** Pupils have been taught how to factorize binomials using GCF	**Introduction** Review Pupils knowledge on factorizing binomials using GCF. **Activities** 1. Demonstrate on how to factorize binomials using difference of squares. 2. Assist Pupils to use difference of squares to factorize binomials.		**A perfect square binomial** is a trinomial that when factored gives you the square of a binomial. For example, the trinomial x^2 + 2xy + y^2 is a perfect square binomial because it factors to (x + y)^2 Writing a binomial as the difference of two squares simply means you rewrite a binomial as the product of two sets of parentheses multiplied by each other. For example, **a2−b2=(a+b)(a−b).** The general formula for factoring a difference of squares is; a2−b2=(a+b)(a−b) a 2 − b 2 = (a + b) (a − b) . **Example** 9x4−25=(3x2+5)(3x2−5) 9 x 4 − 25 = (3 x 2 + 5) (3 x 2 − 5)	**Exercise;** Factorize the following; i. X^2-9 ii. $4x^2$ -49 iii.$9x^2$-$16y^2$ iv.$15y^3$ - 90

			Closure			

Name of Teacher: ***School:*** ***District:***