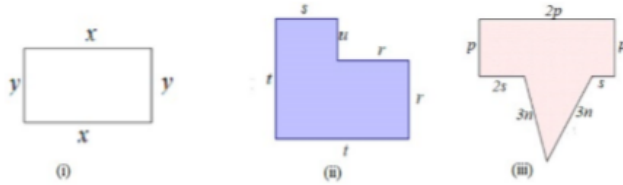


SECOND TERM WEEKLY LESSON NOTES

WEEK 6

Date: 17 th JUNE, 2022	DAY:	Subject: Mathematics
Duration:		Strand: Algebra
Class: B7	Class Size:	Sub Strand: Algebraic Expressions
Content Standard: B7.2.2.1 Simplify algebraic expressions involving the four basic operations and substituting values to evaluate algebraic expressions.	Indicator: B7.2.2.1.2 Perform addition and subtraction of algebraic expressions with rational coefficients.	Lesson: 1 of 2
Performance Indicator: Learners can perform addition and subtraction of algebraic expressions		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 36-37		
Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	Using questions and answers, review to find out what learners already know about Algebraic Expressions. Share learning indicators and introduce the lesson.	
PHASE 2: NEW LEARNING	Guide learners to add algebraic expressions. Let learners understand that, only like terms can be added or subtracted to give a single term. Example: 1). $4x + 3x + x = 8x$ 2). $5x + 4x + 2x + 3x = 14x$ 3). $s + s + s + t + t + k + k + k$ $= 3s + 2t + 3k$ Engage learners to practice with more examples. Go round the class and provide assistance to the slow learners. Perform activities like “think of a number” game with pupils E.g. <i>think of a number, add 2 to it and multiply the sum by 3.</i> $= (x + 2) \times 3 = 3x + 6$ <i>Think of another number, multiply it by 2, add 4 to the result</i> i.e. $(y - 2) + 4 = 2y + 4$ Add the results; $(3x + 6) + (2y + 4) = 3x + 2y + 10$ Write an expression for the perimeter of the following shapes	Counters, bundle and loose straws base ten cut square, Bundle of sticks, rectangular cut out, bottle tops, algebra tiles



(i) perimeter = $l + l + b + b$
 $= x + x + y + y$
 $= 2x + 2y$

Engage learners to practice with more examples. Go round the class and provide assistance to the slow learners.

Guide learners to subtract algebraic expressions.

Example: $3x - 4x - 2x = -3x$
 $7x - 4x - x = 2x$

Guide learners to add and subtract algebraic expressions.

Example: $5x + 4 - 9y + 3x + 2y - 7$

We first group like terms taking notice of the operation signs.

$= 5x + 3x - 9y + 2y + 4 - 7$
 $= 8x - 7y - 3$

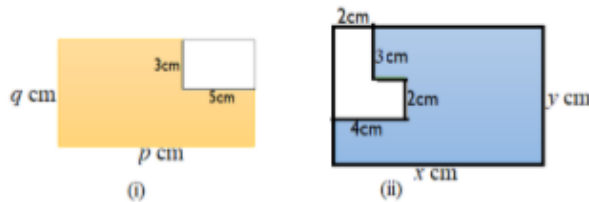
E.g.2. $7xy + 5x - 4x + 2xy - 3$

We first group like terms taking notice of the operation signs.

$= 7xy + 2xy + 5x - 4x - 3$
 $= 9xy + x - 3$

Engage learners to practice with more examples. Go round the class and provide assistance to the slow learners.

Learners to write an expression for the perimeter of the shaded region.






Assessment

Simplify the following expressions

1. $5x + 4 - 9y + 3x + 2y - 7$
2. $4x + 2y + 3x + 5y$
3. $2p - 3q + 3p + 5q$

	4. $4x^2y + 5xy^2 + 3x^2y - 2xy^2$ 5. $x^2 + x + 2x^2$	
PHASE 3: REFLECTION	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	

Date: 17 th JUNE, 2022	DAY:	Subject: Mathematics
Duration:		Strand: Algebra
Class: B7	Class Size:	Sub Strand: Algebraic Expressions
Content Standard: B7.2.2.1 Simplify algebraic expressions involving the four basic operations and substituting values to evaluate algebraic expressions.	Indicator: B7.2.2.1.3 Perform multiplication and division of algebraic expressions with rational coefficients.	Lesson: 2 of 2
Performance Indicator: Learners can perform multiplication and division of algebraic expressions		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 38-39		

Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	<p>Revise with learners on the previous lesson. Call volunteer learners to the board to solve sample questions.</p> <p>Introduce the lesson by sharing performance indicators.</p>	
PHASE 2: NEW LEARNING	<p>Guide learners to solve multiplication of algebraic expressions. <i>It is easier to group the numbers and the same letters together and then use the basic rules of indices.</i> Example: $4p \times 8p^2$ $= 4 \times 8 \times (p^{1+2})$ $= 32p^3$</p> <p>E.g.2. $5xy^2 \times 4x^4y^3 = 20x^5y^5$</p> <p>Guide pupils to perform activities like “think of a number” game which involves multiplying algebraic expressions.</p> <p>Guide learners to write an expression for the area of the following shapes:</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>(i)</p> </div> <div style="text-align: center;">  <p>(ii)</p> </div> <div style="text-align: center;">  <p>(iii)</p> </div> </div> <p>Guide learners to solve division of algebraic expressions. Example: Simplify the following expression:</p> $1. \frac{12x^3y^2}{16xy^4}$ $= \frac{12}{16} \times (x^{3-1})(y^{2-4})$	Counters, bundle and loose straws base ten cut square, Bundle of sticks, rectangular cut out, bottle tops, algebra tiles

	$= \frac{3}{4} \times (x^2)(y^2) = \frac{3}{4} x^2y^2$ <p>E.g. II. $\frac{-30abc}{6ab^3c^{-2}}$</p> $= \frac{-30}{6} * (a^{-1})(b^{1-3})(c^{-1-3})$ $= -5 * (b^{-2})(c^{-4}) = -5b^{-2}c^{-4}$ <p><u>Assessment</u> Simplify the following expression:</p> <ol style="list-style-type: none"> 1. $5p \times 7p^2$ 2. $6xy^3 \times 4x^5y^6$ 3. $-2b \times 5a \times 9c$ 4. $-3xy^5 \times 7y$ 5. $\frac{18x^5y^2}{24x^7y^2}$ 	
<p>PHASE 3: REFLECTION</p>	<p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>	