SECOND TERM LESSON PLAN

MATHEMATICS – B7

WEEK 3

Date: 27ᵗʰ MAY, 2022		DAY:		Subject: Mathematics	
Duration:				Strand: Number	
Class: B7		Class Size:		Sub Strand: Ratios and Proportion	
Content Standard: B7.1.4.1 Demonstrate an understanding of the concept of ratios and its relationship to fractions and use it to solve problems that involve rates, ratios, and proportional reasoning.			Indicator: B7.1.4.1.5 Find a percent of a quantity as a rate per 100.		Lesson: 3 of 3
Performance Indicator: Learners can find a percent of a quantity as a rate per 100			Core Competencies: Critical Thinking and Problem solving (CP)		
References: Mathematics Curriculum Pg. 21					

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Revise with learners on the previous lesson. Call volunteer learners to the board to solve sample questions. Introduce the lesson by sharing performance indicators.	
PHASE 2: **NEW LEARNING**	Introduce learners to rates. Brainstorm learners for the meaning of rates. Example: *A rate is a ratio that compares two quantities with different units of measure.* Guide learners to express quantities in rates. ➢ A unit rate is a rate that has 1 unit as its second term, or denominator. Example: Lisa ran 18 miles at a steady pace in 3 hours. Her average speed can be expressed as a ratio: $:\dfrac{18\ miles}{3\ hours}$ = 18 miles : 3 hours = 18 miles in 3 hours To find how many miles Moya ran in 1 hour, use equivalent ratios. So if 18 miles : 3 hours, then χ miles : 1 hour $=\dfrac{18\ miles}{3\ hours}=\dfrac{\chi\ miles}{1\ hours}$ → 18 x 1 = 3 x χ	Counters, bundle and loose straws base ten cut square, Bundle of sticks

→ $3\chi = 18$

→ $\chi = 6$

Have learners practice with more examples.

Guide learners to solve problems involving discounts.
A discount is a reduction of the list, or regular, price of an item.
The rate of discount is given as a percent.
The sale price is the difference between the list price and the discount

- Discount = Rate of Discount × List Price
  $$D = R \times LP$$
- Sale Price = List Price − Discount
  $$SP = LP - D$$

Example:
Some CDs at Fayol's Music World regularly sell for ¢15 each. This week they are being sold at a 15% discount. What is the discount? What is the sale price?

➢ To find the discount, *D*, write an equation and solve for the discount.

D = 15% of ¢15
D = 0.15 x ¢15
D = ¢ 2.25

The discount on each CD is ¢2.25.

➢ To find the sale price, SP, write an equation and solve for the sale price.

SP = ¢15.00 - ¢2.25
SP = ¢12.75

The sale price of each CD is ¢12.75

Have learners practice with more examples.

Guide learners to solve problems involving commission.
Commission is the amount of money that a salesperson is paid for selling a product or service. The rate of commission is given as a percent.
A salesperson works on straight commission if the commission is the only pay he or she receives

- Commission = Rate of Commission × Total Sales
$$C = R \times TS$$
- Total Earnings = Salary + Commission
$$TE = S + C$$

Example:
A salesman gets paid 35% commissions. How much commission does he make on sales of GH₵700?

➢ To find the commission, C, write an equation and solve for the commission.

C = 35% of ₵ 700
C = 0.35 × ₵ 700
C = ₵ 245

Have learners practice with more examples.

Assessment

i. Three rides on the roller coaster cost $2.25. How much does one ride cost?

ii. Chantal paid GH₵80 for a shirt that was on sale at a discount of 20%. What was the original price?

iii. A cell phone which regularly sells for GH₵450 is on sale for 40% off. How much would you pay for the phone?

iv. A woman put GH₵520 into a savings account for one year. The rate of interest on the account was 6%. How much was the interest for the year?
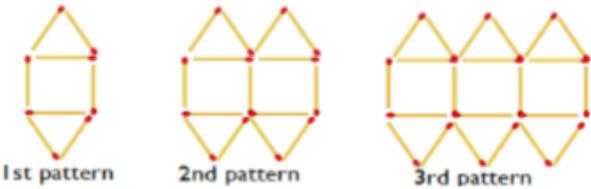
v. During the first hour 250 tickets to a concert were sold. At this rate how long will it be before 1500 tickets are sold?

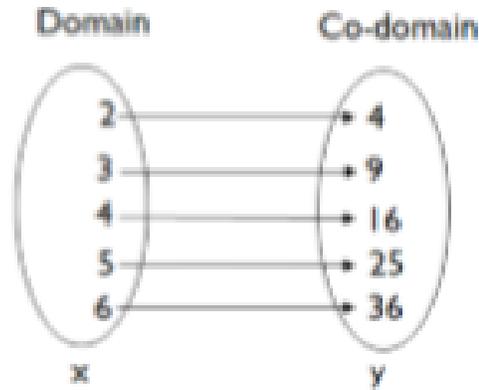| PHASE 3: REFLECTION | Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson. | |

Date:	DAY :	Subject: Mathematics
Duration:		Strand: Algebra
Class: B7	Class Size:	Sub Strand: Patterns and Relations

Content Standard: B7.2.1.1 Derive the rule for a set of points of a relation, draw a table of values to graph the relation in a number plane and make predictions about subsequent elements of the relation.	Indicator: B7.2.1.1.1 Extend a given relation presented with and without symbolic materials and explain how each element differs from the preceding one.	Lesson: 1 of 3
Performance Indicator: Learners can predict subsequent elements in a given pattern		Core Competencies: Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 27-28		

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Revise with learners on the previous lesson. Call volunteer learners to the board to solve sample questions. Introduce the lesson by sharing performance indicators.	
PHASE 2: **NEW LEARNING**	Guide learners to extend a given symbolic relation. 1st pattern 2nd pattern 3rd pattern Let learners study the pattern made with match sticks below and draw the fifth pattern. Learners to analyze How each pattern differ from the pattern that comes before it? Have learners to copy and complete the table for the number of sticks in each pattern. Engage learners to study the pattern of numbers below and complete table.	Abacus, Color coded materials, place value chart, Number facts flash cards; Flashcards

Pattern No.	1	2	3	4	5	6	7
Number of sticks	8	15					

Domain	1	2	3	4	5	6	7
Co-domain	4	7	10		16		

	Guide learners to find missing numbers in the co-domain?	
	Demonstrate to learners how to extend a given number relation.	
	i. If the next number in the domain is 9, what will be the corresponding number in the co-domain?	

Assessment

Copy and complete the table for the number of sticks in each pattern.

Domain	1	2	3	4	5	6	7
Co-domain	4	7	10		16		

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.