

THIRD TERM
WEEKLY LESSON NOTES
WEEK 3

Week Ending: 14-07-2023	DAY:	Subject: Mathematics																
Duration: 60MINS		Strand: Number																
Class: B8	Class Size:	Sub Strand: Ratios and Proportion																
Content Standard: B8.1.4.1 Demonstrate an understanding of ratio, rate and proportions and use it these to solve real-world mathematical problems		Indicator: B8.1.4.1.4 Recognize and represent proportional relationships between quantities by deciding whether two quantities are in a proportional relationship.																
		Lesson: 1 of 1																
Performance Indicator: Learners can recognize and represent proportional relationships between quantities by deciding whether two quantities are in a proportional relationship		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)																
References: Mathematics Curriculum Pg. 105																		
Phase/Duration	Learners Activities	Resources																
PHASE 1: STARTER	Using blackboard illustrations, review learners understanding in the previous lesson. Introduce the lesson by sharing the performance indicators.																	
PHASE 2: NEW LEARNING	Brainstorm and discuss with learners the meaning of proportional relationship. <i>A proportional relationship is a type of relationship between two quantities in which their ratio remains constant. In other words, when one quantity is multiplied by a constant factor, the other quantity is also multiplied by the same constant fact.</i> For example, consider a situation where the distance traveled by a car is proportional to the time it takes to travel that distance. If the car travels 60 miles in 2 hours, then the distance-time ratio is $60/2 = 30$ miles per hour. If the car then travels 90 miles, we can use the proportional relationship to find the corresponding time. Since the ratio is 30 miles per hour, the time it takes to travel 90 miles is $90/30 = 3$ hours. <table border="1" style="margin-left: auto; margin-right: auto;"><thead><tr><th>Number of Hours</th><th>Miles</th><th>Ratio of miles to Hours</th></tr></thead><tbody><tr><td>1</td><td>30</td><td>$\frac{30}{1} = 30$</td></tr><tr><td>2</td><td>60</td><td>$\frac{60}{2} = 30$</td></tr><tr><td>3</td><td>90</td><td>$\frac{90}{3} = 30$</td></tr></tbody></table> Guide learners to solve examples on proportional relations. Example: the table below shows the ime spent by kofi to cover certain distance on his motor bike. Determine whether the table is proportional or not. <table border="1" style="margin-left: auto; margin-right: auto;"><thead><tr><th>Time (hr)</th><th>Distance (km)</th></tr></thead><tbody><tr><td>0</td><td>0</td></tr></tbody></table>	Number of Hours	Miles	Ratio of miles to Hours	1	30	$\frac{30}{1} = 30$	2	60	$\frac{60}{2} = 30$	3	90	$\frac{90}{3} = 30$	Time (hr)	Distance (km)	0	0	Counters, bundle and loose straws base ten cut square, Bundle of sticks
Number of Hours	Miles	Ratio of miles to Hours																
1	30	$\frac{30}{1} = 30$																
2	60	$\frac{60}{2} = 30$																
3	90	$\frac{90}{3} = 30$																
Time (hr)	Distance (km)																	
0	0																	

2	6
4	12
6	18

Solution

Time (hr)	Distance (km)	Ratio of distance to time
0	0	0
2	6	$\frac{6}{2} = 3$
4	12	$\frac{12}{4} = 3$
6	18	$\frac{18}{6} = 3$

From the table, we can deduce that since the ratios are equivalent, the table is proportional.

Assessment

Study the table below and determine whether the table is proportional or not.

Time (hr)	Distance (km)
0	4
2	10
4	16
6	22

**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.

Week Ending: 14-07-2023	DAY:	Subject: Mathematics
Duration: 60MINS		Strand: Number
Class: B8	Class Size:	Sub Strand: Ratios and Proportion
Content Standard: B8.1.4.1 Demonstrate an understanding of ratio, rate and proportions and use it these to solve real-world mathematical problems		Indicator: B8.1.4.1.5 Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
		Lesson: 1 of 1
Performance Indicator: Learners can make tables of equivalent ratios relating quantities that are proportional		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 102		
Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	Using blackboard illustrations, review learners understanding in the previous lesson. Introduce the lesson by sharing the performance indicators.	
PHASE 2: NEW LEARNING	Guide learners to explain constant of proportionality. When two variables are directly proportional, it means that they increase or decrease at the same rate. In other words, if one variable doubles, the other variable doubles as well. The equation that expresses this relationship is of the form: $y = kx$ Where y and x are the two variables, and k is the constant of proportionality. The value of k remains the same for any given set of values of y and x . For example, if y is directly proportional to x , and $y = 4$ when $x = 2$, then the constant of proportionality, k , is given by: $k = y/x = 4/2 = 2$ So the equation that expresses the relationship between y and x is: $y = 2x$ This means that if x is multiplied by any number, y will also be multiplied by the same number, and the ratio between y and x will remain constant at 2. An ant travels 9 8 inches in 45 seconds and 27 8 inches in 2 minutes and 15 seconds. What is the constant of proportionality?	Counters, bundle and loose straws base ten cut square, Bundle of sticks
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.	