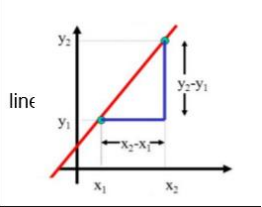


SECOND TERM
WEEKLY LESSON NOTES
WEEK 2

Week Ending: 14-04-2023	DAY:	Subject: Mathematics
Duration: 60MINS		Strand: Number
Class: B8	Class Size:	Sub Strand: Powers Of Natural Numbers
Content Standard: B8.1.2.3 Demonstrate understanding and the use of the laws of indices in solving problems involving powers of natural numbers		Indicator: B8.1.2.3.4 Solve real life problems involving powers of natural numbers.
		Lesson: 1 of 2
Performance Indicator: Learners can solve real life problems involving powers of natural numbers		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	Revise with learners on the previous lesson. Share performance indicators with learners and introduce the lesson.	
PHASE 2: NEW LEARNING	Guide learners to solve exponential equations and Solve real life problems involving powers of natural numbers 1. A person has a piece of land that is 50 meters long and 30 meters wide. How many square meters is the land? Solution: The area of the land is given by the product of its length and width, so we have: Area = 50 m x 30 m = 1500 m ² Therefore, the land has an area of 1500 square meters. 2. A car travels at a speed of 60 km/h for 3 hours. How far does the car travel? Solution: The distance travelled by the car is given by the product of its speed and time, so we have: Distance = Speed x Time = 60 km/h x 3 h = 180 km Therefore, the car travels 180 kilometers. 3. A building has 10 floors, each with a height of 3 meters. How high is the building? Solution: The total height of the building is given by the product of the height of each floor and the number of floors, so we have: Height = 10 x 3 m = 30 m Therefore, the building is 30 meters high. 4. A recipe calls for 2 cups of flour, 1/2 cup of sugar, and 1/4 cup of butter. If you want to make twice the recipe, how much flour do you need? Solution: If we want to make twice the recipe, we need to double the amount of each ingredient. So we have: Flour = 2 cups x 2 = 4 cups Sugar = 1/2 cup x 2 = 1 cup Butter = 1/4 cup x 2 = 1/2 cup Therefore, we need 4 cups of flour to make twice the recipe.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	<p>5. A container of juice contains 1 liter of juice. If we pour $\frac{1}{4}$ of the juice into a glass, how much juice is left in the container? Solution: If we pour $\frac{1}{4}$ of the juice into a glass, we are left with $\frac{3}{4}$ of the juice in the container. So we have: Juice left in container = $1 \text{ L} \times \frac{3}{4} = 0.75 \text{ L}$ Therefore, there is 0.75 liters of juice left in the container</p> <p><u>Assessment</u> Guide learners to solve real-life problems on populations.</p> <p>While studying her family's history, Saratu discovers records of ancestors 12 generations back. She wonders how many ancestors she has had in the past 12 generations. She starts to make a diagram to help her figure this out. The diagram soon becomes very complex</p> <p>Through illustrations, make a table and a graph showing the number of ancestors in each of the 12 generations. ii. Write an equation for the number of ancestors in a given generation n.</p>	
<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>	

Week Ending: 14-04-2023	DAY:	Subject: Mathematics
Duration: 60MINS		Strand: Algebra
Class: B8	Class Size:	Sub Strand: The Gradient Of A Line
Content Standard: B8.2.1.1 Demonstrate the ability to draw table of values for a linear relation, graph the relation in a number plane, determine the gradient of the line and use it to write equation of a line of the form $y = mx + c$.		Indicator: B8.2.1.1.1 Calculate the gradient of a line and use it to write equation of a line of the form $y = mx + c$.
Performance Indicator: Learners can calculate the gradient of a line and use it to write equation of a line of the form $y = mx + c$		Lesson: 2 of 2
Performance Indicator: Learners can calculate the gradient of a line and use it to write equation of a line of the form $y = mx + c$		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 112		
Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	Revise with learners on the previous lesson. Share performance indicators with learners and introduce the lesson.	
PHASE 2: NEW LEARNING	<p>Explain the concept of gradient using real life examples and to discover the practical meaning of gradient.</p> <p>The gradient is the measure of how steep the hill the rider is climbing is. The gradient is the slope (or steepness) of the roofing of the building.</p> <p>Determine the formula for calculating the gradient of a line.</p> <p>The formula for calculating the gradient of a straight.</p>  $\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$ <p>Determine the gradient when given two coordinates. Find the gradient of a line which passes through the point; i. A (1, 1) and B (7, 2) ii. P (-2, 4) and Q (3, 5) iii. C (3, -2) and D (-3, 4)</p> <p>Determine the gradient of a straight line when its equation is given. Find the gradient from the equation of the straight line below.</p> <p>1. $y = 5x + 13$</p>	Counters, bundle and loose straws base ten cut square, Bundle of sticks

2. $2x - 8y + 3 = 0$

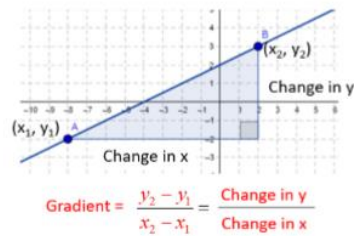
3. $y = -3x + 12$



Determine the gradient from a graph. From the graph, the coordinates are A (-8,-2), B (2, 3).

$$m = \frac{-2-3}{-8-2} = \frac{-5}{-10} = \frac{1}{2}$$

The gradient of the line is $\frac{1}{2}$



Determine the slope-intercept form of the equation of a straight line

Hint: The equation of a straight line in slope-intercept form is $y = mx + c$.

Find the equation of a line with slope 2 and y-intercept -3. Hence find the value of y when x is 4.

Find the equation of a line in slope-intercept form having y-intercept $\frac{7}{2}$ and slope $-\frac{5}{2}$

Find the equation of a line with slope $\frac{1}{2}$ and y-intercept 4

E.g.7 Determine the point-slope form of the equation of a straight line Hint: The point-slope form of the equation of a straight line is $y - y_1 = m(x - x_1)$

Find the equation of a line with slope $\frac{2}{3}$ that passes through the point (3, -1)

Find the equation of a line that passes through the point (3, -7) and has the slope $m = \frac{5}{4}$

Find the equation of a line which passes through the points (5, 4) and (-10, 2).

	Write the equation $5x + 4y - 3 = 0$ in the form $y = mx + c$. Hence state the gradient and the intercept.	
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.	