MATHEMATICS

Grade 6

Three-Term Budget Of Work (BOW)
for Learning Competencies

GENERAL MATHEMATICS
Grade 6

Three-Term Budget Of Work
For Learning Competencies

First Term	
Content Standard	The learners should have knowledge and understanding of… • tessellation of shapes • translation, reflection and rotation with shapes • the four operations with decimals • the four operations with different combinations of fractions, whole numbers, and mixed numbers • ratio
Performance Standard	By the end of the term, the learners are able to… • tessellate a surface using different shapes. • perform the four operations with decimals. • perform the four operations with different combinations of fractions, whole numbers, and mixed numbers. • describe and apply the concepts of ratio.

Week	Learning Competency
1	**Measurement and Geometry** • Explore whether or not a shape tessellates. • Tessellate a surface using different shapes, including triangles, squares, and rectangles.
2	**Measurement and Geometry** • Draw resulting images of shapes that undergo translation, reflection, rotation

3	**Number and Algebra** • Add and subtract decimals with decimal parts of up to 4 decimal places. • Solve multi-step problems involving addition and/or subtraction of decimals, including problems involving money.
4	**Number and Algebra** • Mentally multiply decimals of up to 2 decimal places by 0.1, 0.01, 0.001, 10, 100, and 1000 • Solve multi-step problems involving multiplication of decimals that may or may not also involve addition or subtraction of decimals, including problems involving money.
5	**Number and Algebra** • Divide: a. 1- to 2-digit whole numbers resulting in a repeating (non-terminating) decimal quotient. (e. g., 1/3 = 0.3333 …) b. a whole number by a decimal of 1 decimal place • Mentally divide: a. decimals of up to 4 decimal places by 0.1, 0.01, and 0.001 b. decimals of up to 2 decimal places by 10, 100, and 1000
6 to 7	**Number and Algebra** • Solve problems involving division of decimals that may or may not involve the other operations with decimals and/or whole numbers. • Obtain products that result from multiplying different combinations of fractions, whole numbers, and mixed numbers. • Solve multi-step problems involving multiplication that may or may not involve addition or subtraction of different combinations of fractions, whole numbers, and mixed numbers.
8	**Number and Algebra** • Divide different combinations of fractions, whole numbers, and mixed numbers. • Solve multi-step problems involving division of different combinations of fractions, whole numbers,

	and mixed numbers that may or may not involve any of the other operations of fractions.
9 to 10	**Number and Algebra** • Describe the relationship between quantities using ratio for: a. part-whole relationships b. part-part relationships." • Express one number as a fraction of another given their ratio, and vice versa. • Identify and write equivalent ratios. • Solve problems involving ratio.

Second Term	
Content Standard	The learners should have knowledge and understanding of… • ratio and proportion • percentages, and their relationships with fractions and decimals • exponential form, including calculation using GEMDAS rules • units of volume and capacity • volumes of cubes and rectangular prisms • perimeter and area of triangles, parallelograms, trapezoids, and composite figures composed of triangles, squares, and rectangles
Performance Standard	By the end of the term, the learners are able to… • describe the parts of a circle. • use pi (π) to calculate the circumference of a circle. • find the area of a circle. • find the area of composite figures composed of any two or more of: triangle, square, rectangle, circle, semi-circle. • construct and interpret pie graphs. • find common factors, greatest common factors, common multiples, and least common multiples.

Week	Learning Competency
1	**Number and Algebra** • Illustrate ratio and proportion in given situations using tables and/or the double number line model. • Find how many times one value is larger than another given their ratio, and vice versa.
2	**Number and Algebra** • Solve problems involving ratio and proportion.

3	**Number and Algebra** • Illustrate and explain the relationships between percentages, fractions, and decimals. • Identify and explain the uses of percentages.
4	**Number and Algebra** • Write numbers in exponential form e.g., 2 x 2 x 2 = 2^3 and vice versa, e.g. 2^3 = 2 x 2 x 2 • Give the value of numbers expressed in exponential form.
5	**Number and Algebra** • Perform calculations involving numbers in exponential form by applying the GEMDAS rules.
6	**Measurement and Geometry** • Determine appropriate units for measuring volume and capacity. • Convert cu. cm to L, and vice versa.
7 to 8	**Measurement and Geometry** • Find the volume of a cube and of a rectangular prism using standard units of measurement. • Solve problems involving volumes of cubes and rectangular prisms. • Solve problems involving capacity.
9	**Measurement and Geometry** • Convert sq. cm to sq. m, and vice versa. • Find the area, in sq. m or sq. cm, of composite figures composed of triangles, squares, and rectangles.
10	**Measurement and Geometry** • Solve problems involving the perimeter and area of triangles, parallelograms, trapezoids, and composite figures composed of triangles, squares, and rectangles.

Third Term	
Content Standard	The learners should have knowledge and understanding of… • parts of a circle, including circumference • area of a circle • composite figures composed of any two or more of: triangle, square, rectangle, circle, semi-circle • pie graphs • common factors, greatest common factors, common multiples, and least common multiples
Performance Standard	By the end of the term, the learners are able to… • multiply and divide decimal numbers. • apply the GMDAS rules with operations with fractions and decimals. • illustrate and describe solid figures and their nets. • determine the surface area of solid figures. • distinguish between cubes and rectangular prisms, and estimate their volumes. • draw the image of an object after applying rotation about a point.

Week	Learning Competency
1	**Measurement and Geometry** • Draw circles with different radii using a pair of compasses. • Identify and describes the parts of a circle.
2	**Measurement and Geometry** • Measure the circumference of circles using appropriate tools. • Approximate the value of pi (p) (the ratio of the circumference to the diameter).

3	**Measurement and Geometry** • Find the circumference of a circle using C = pd of C= 2pr • Explore inductively the area of a circle leading to the formula A^2=pr
4 to 5	**Measurement and Geometry** • Find the area of a circle using the formula. • Find the area of composite figures composed of any two or more of the following: triangle, square, rectangle, circle, and semicircle. • Solve problems involving circumference and area of circles, and composite figures.
6	**Data and Probability** • Find the angle measures and/or percentages based on the given data for a pie graph. • Construct a pie graph using appropriate tools.
7	**Data and Probability** • Interpret data presented in a pie graph. • Interpret data from digital media that are presented in tabular or graphical form.
8	**Data and Probability** • Draw conclusions or make inferences based on data presented in a pie graph. • Solve problems using data presented in a pie graph.
9 to 10	**Number and Algebra** • Determine the common factors and the greatest common factor (GCF) of two numbers using the following methods: listing, prime factorization, and continuous division. • Find the common multiples and least common multiple (LCM) of two numbers using the following methods: listing, prime factorization, and continuous division. • Solve problems involving GCF and LCM.