K to 12 Basic Education Curriculum for the Alternative Learning System (ALS-K to 12)

Learning Strand 3

MATHEMATICAL AND PROBLEM SOLVING SKILLS

2017

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: MATHEMATICAL AND PROBLEM SOLVING SKILLS

Mathematical and Problem Solving Skills focus on Scientific Literacy and Numeracy Skills, which are basic to meaningful participation in community life and improving the quality of life of the people, the community, and the country as a whole.
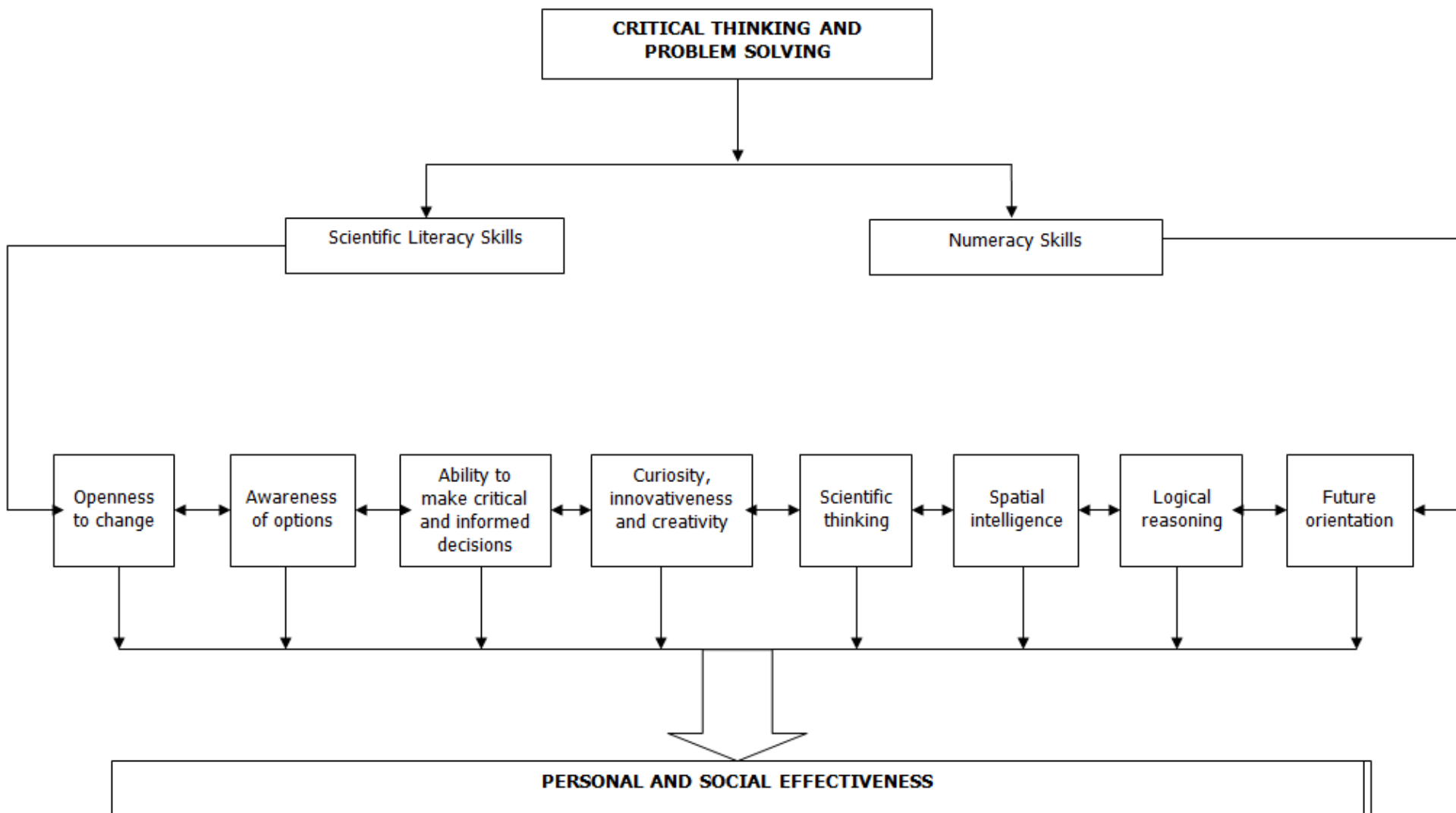
Learning Strand 3 is intended to develop in 17-year-olds and older out-of-school youth and adults skills that include the core competencies of scientific literacy and numeracy. Integrated across scientific and numeracy literacy skills are the critical functional competencies of openness to change, awareness of options, ability to make critical and informed decisions, curiosity, inventivenessand creativity, scientific thinking, logical reasoning, spatial intelligence, and future orientation. These competencies specifically seek to extend and refine learners' critical and creative thinking processes, including the abilities to:

- organize new knowledge
- gather and analyze information
- categorize things and ideas
- make comparisons
- infer principles from evidence
- critique one's own thinking
- evaluate options as a basis of decision making
- apply the scientific process
- seek explanations for applying the scientific process
- support assertions with evidence
- overcome obstacles and find a better way of doing things
- apply principles to draw conclusions
- learn independently

The ultimate goal of Learning Strand 3 is to develop individuals who are aware of their own thinking, able to make critical and informed decisions, defend their ideas and evaluate the ideas of others, and are persistent in striving for new ways to solve problems. Through the development of such critical thinking and problem-solving skills, ALS learners will enhance their own personal and social effectiveness by way of improvingthe quality of life.

The framework of Learning Strand 3 is schematically presented inthe following page.

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                    │   CRITICAL THINKING AND       │
                    │      PROBLEM SOLVING          │
                    └──────────────────────────────┘
                                   │
               ┌───────────────────┴───────────────────┐
               ▼                                         ▼
   ┌───────────────────────┐               ┌───────────────────────┐
   │ Scientific Literacy   │               │    Numeracy Skills    │
   │        Skills         │               │                       │
   └───────────────────────┘               └───────────────────────┘
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| Openness to change | Awareness of options | Ability to make critical and informed decisions | Curiosity, innovativeness and creativity | Scientific thinking | Spatial intelligence | Logical reasoning | Future orientation |

PERSONAL AND SOCIAL EFFECTIVENESS

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

The numeracy component of Learning Strand 3 focuses on competencies needed for effective mathematical learning and problem solving. Its emphasis is on how these mathematical competencies would be applied to daily life situations. To this end, real-life examples are given for many of the competencies. During curriculum implementation, further emphasis will be necessary on contextualization of the mathematical competencies to align with different learning contexts, needs, and situational realities of different ALS learners.

The competencies are logically sequenced from simple to complex based on the level of cognitive demand and nature of the Mathematics subject area. For example, before being able to do division of fractions, its prerequisite is that one must first understand multiplication of fractions. The ALS Mathematics curriculum contains the following performance standards:

- PERFORMANCE STANDARD A includes the desirable attitudes and values reflected on the learner's behavior within or beyond Mathematics classes.
- PERFORMANCE STANDARD B includes K to 12 curriculum competencies on Number and Number Sense. It comprises topics on whole number, fraction, decimal, ratio and proportion, percent, and sets and integers.
- PERFORMANCE STANDARD C includes K to 12 curriculum competencies on Geometry. It comprises topics like undefined terms in Geometry, the study of plane and surface figures, the different shapes and their properties, and their applications in real life objects and situations.
- PERFORMANCE STANDARD D includes K to 12 curriculum competencies on Measurement. The topics are perimeter, area, circumference, and volume in different units, standard and contextualized, and their applications in real life situations.
- PERFORMANCE STANDARD E includes K to 12 curriculum competencies on Patterns and Algebra. It contains topics on Exponent, Algebraic Expressions, Polynomial, Rational Algebraic Expressions, Equations and Inequalities, Sequences and Series, and Functions and Graphs.
- PERFORMANCE STANDARD F includes K to 12 curriculum competencies on Statistics and Probability. The topics cover descriptive statistics like measures of central tendency, measures of variation, measures of position including different statistical activities like to gather and record data, present data on table and graph, and interpret data on graph and chart. The learners will also perform simple experiments, and study fundamental principles of counting, permutation, and combination, and their applications in real life situations. In compliance to Grade 12 Statistics and Probability, competencies on correlational value and measures were also added.

It is envisioned that the attainment of these performance standards will equip ALS learners with the necessary minimum foundational mathematics competencies to prepare them for the world of work and further study under the Senior High School Program.

SENIOR HIGH SCHOOL

To complete SHS and meet the competencies for the middle skills development, entrepreneurship, and employment exits of the basic education curriculum, ALS learners must complete the competencies that are specified in Statistics and Probability. They should also complete the specialization subjects of any of the following Senior High School tracks: Sports, Arts and Design or Technical-Vocational-Livelihood.

College-bound ALS learners in SHS must also complete the core subjects General Mathematics and Statistics and Probability (or their equivalents). They must also complete all the specialization subjects in any of the Academic Strands (Accountancy, Business and Management [ABM], Humanities and Social Sciences [HUMSS], Science, Technology, Engineering and Mathematics [STEM], or General Academic).

If an ALS learner who has completed the K to 12 curriculum wishes to proceed to higher education, this learner may return to the ALS program and take the core curriculum at any time.

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: Mathematical and Problem Solving Skills

Content Standard: Numeracy Skills
Performance Standard: Acquire mathematical skills for personal and social effectiveness.
Performance Standard A: Show desirable attitudes and values in the application of mathematics in daily life.

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
1	Demonstrates the importance and value of mathematics as a means of communicating and solving problems in daily life, e.g., computing and comparing costs of goods to make a decision on which to buy.		LS2CP/NS-NS-PSA-LE/AE/LS/AS-1		√	√	√	√
2	Demonstrates creativity, interest, and curiosity in asking questions, defining problems, considering different strategies, and finding appropriate solutions to problems through mathematics, e.g., analyzing the given data in a problem and identifying what mathematical operation will be applied to solve the problem.		LS2CP/NS-NS-PSA-BL/LE/AE/LS/AS-2	√	√	√	√	√
3	Expresses satisfaction in mastery of new ways of thinking through application of mathematics, e.g., deciding the shortest and most accurate way of solving problems in daily life that require mathematical solutions.		LS2CP/NS-NS-PSA-LE/AE/LS/AS-3		√	√	√	√
4	Integrates mathematics with disciplines such as economics, agricultural studies, communication arts, science and technology, geography, cooking, architecture, music, e.g., use of comprehension skills in analyzing problems that would lead to the most accurate way of solving the problem, interpret the number of beats musical notes/rests in a musical composition, etc.		LS2CP/NS-NS-PSA-LE/AE/LS/AS-4		√	√	√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
5	States the advantages of accuracy and precision in mathematics, e.g., in measurement.		LS2CP/NS-NS-PSA-LE/AE/LS/AS-5		√	√	√	√
6	Exhibits honesty and accuracy in collecting and reporting mathematical data, e.g., use of untampered measuring instruments such as measuring tapes, weighing scales, volume measurers, and electric and water meters.		LS2CP/NS-NS-PSA-LE/AE/LS/AS-6		√	√	√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: Mathematical and Problem Solving Skills

Content Standard: Numeracy Skills
Performance Standard: Acquire mathematical skills for personal and social effectiveness.
Performance Standard B: Communicate ideas using mathematical symbols and expressions.

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
1	Read whole numbers	MKC-00-2 MKC-00-3 M1NS-Ia-1.1	LS2CP/NS-NS-PSB-BL-1	√				
1.1	Read one-digit whole numbers	MKC-00-2 MKC-00-3	LS2CP/NS-NS-PSB-BL-1.1	√				
	* number of ALS classes per week *number of harvest season per year			√				
1.2	Read two- and three-digit whole numbers	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL-1.2	√				
	*dates in calendars (birthdays, anniversaries, holidays, historical events)			√				
	*house numbers, clothes and shoe sizes, bus numbers, car plate numbers			√				
	*height and weight of learners			√				
	*road signs on speed limit of cars and other vehicles			√				
	*pressure gauge readings			√				
	*product labels (ingredients, composition, weights, content, and expiration date)			√				
1.3	Read symbols/numbers of 4- to 6- digit whole numbers	M2NS-Ia-1.2 M2NS-Ic-9.2	LS2CP/NS-NS-PSB-BL/LE-1.3	√	√			
	*population of province, country, region, world			√	√			
	* sweepstakes, and lotto prizes			√	√			
	* income/expenditure of individuals, households, municipalities, and provinces			√	√			

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
1.4	Read numbers/symbols of 7- to 10- digit whole numbers		LS2CP/NS-NS-PSB-LE/AE-1.4		√	√		
2	Write whole numbers	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL/LE-2	√	√			
2.1	Write numbers of one-digit whole numbers	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL-2.1	√				
2.2	Write two- and three-digit whole numbers	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL-2.2	√				
2.3	Write numbers/symbols of 4- to 6- digit whole numbers		LS2CP/NS-NS-PSB-BL/LE-2.3	√	√			
2.4	Write numbers/symbols of 7- to 10- digit whole numbers		LS2CP/NS-NS-PSB-LE/AE-2.4		√	√		
3	Identify numbers		LS2CP/NS-NS-PSB-BL/LE-3	√	√			
3.1	Identify numbers 0–20 (Kindergarten level)	MKC-00-2	LS2CP/NS-NS-PSB-BL-3.1	√				
3.2	Identify numbers up to 100 with emphasis on numbers 21–100 (Grade 1)	M1NS-Ia-1.1	LS2CP/NS-NS-PSB-BL-3.2	√				
3.3	Identify numbers from 0–1000 with emphasis on 101–1000	M2NS-Ia-1.2	LS2CP/NS-NS-PSB-BL/LE-3.3	√	√			
3.4	Identify numbers up to 10,000 with emphasis on 1001–10,000	M3NS-Ia-1.3	LS2CP/NS-NS-PSB-LE/AE-3.4		√	√		
3.5	Identify numbers up to 100,000 with emphasis on numbers 10,001–100,000	M4NS-Ia-1.4	LS2CP/NS-NS-PSB-AE-3.5			√		
3.6	Identify numbers up to 10,000,000 with emphasis on 100,001–10,000,000	M5NS-Ia-1.5	LS2CP/NS-NS-PSB-AE-3.6			√		
4	Translate numbers/symbols into words or viceversa	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL/LE-4	√	√			
4.1	Translates symbols/numbers into words of one-digit whole numbers or vice-versa	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL-4.1	√				

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
4.2	Translates two- and three-digit whole numbers into words or symbols, or vice-versa	M1NS-If-9.1	LS2CP/NS-NS-PSB-BL/LE-4.2	√	√			
4.3	Translates numbers/symbols of 4- to 6- digit whole numbers into words and viceversa	M2NS-Ic-9.2 M3NS-Ia-9.3 M4NS-Ia-9.4	LS2CP/NS-NS-PSB-LE/AE-4.3		√	√		
5	Represents numbers using variety of materials		LS2CP/NS-NS-PSB-BL/LE/AE/LS/AS-5	√	√	√	√	√
5.1	Represents numbers from 0–20 (Kindergarten level)	MKC-00-4	LS2CP/NS-NS-PSB-BL-5.1	√				
	*number of children in the family			√				
	*number of students in the ALS class			√				
	*number of chicks hatched by a mother hen			√				
5.2	Represents numbers from 0–100	M1NS-Ia-1.1	LS2CP/NS-NS-PSB-BL-5.2	√				
	*number of trees in the field/farm			√				
	*number of days in one month			√				
5.3	Represents numbers from 101–1000 using variety of materials		LS2CP/NS-NS-PSB-BL/LE-5.3	√	√			
	*number of days per year				√			
	*number of population in the community				√			
6	Counts and groups objects:	M1NS- Id-5	LS2CP/NS-NS-PSB-BL/LE/AE-6	√	√	√		
	*by piece or by dozen as in eggs, by kind or size as in fish and fruits			√				
	*by *kaing* as in fruits			√				
	*by sacks as in rice, cement			√				
	*by the number of male and female in a learning group			√				
	*by votes cast per candidate in a barangay election			√				
7	Identifies the parts/elements of a group (e.g., fruits and vegetables sold by a stall owner)		LS2CP/NS-NS-PSB-LE/AE-7		√	√		

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
8	Determines the common parts/components found between two groups (e.g., the similar kinds of plants sold in two different stalls in a garden show)		LS2CP/NS-NS-PSB-LE/AE-8		√	√		
9	Determines the parts/components of two groups (e.g., assorted canned goods in one basket and assorted fruits in another basket)		LS2CP/NS-NS-PSB-LE/AE-9		√	√		
10	Determine the total number of subgroups in a group (e.g., the number of males and females in a barangay assembly meeting)		LS2CP/NS-NS-PSB-LE/AE-10		√	√		
11	Gets the difference between two groups (e.g., in poultry raising, by how many more are the hens than the roosters)		LS2CP/NS-NS-PSB-LE/AE-11		√	√		
12	Reads and writes money values (pesos and centavos)	MKAT-00-2 M1NS-Ij-19.1	LS2CP/NS-NS-PSB-BL/LE/AE-12	√	√	√		
13	Compares values of different denominations of Philippine coins and paper bills using the relation symbols: >, < or =	M2NS-If-22.1	LS2CP/NS-NS-PSB-BL/LE/AE-13	√	√	√		
	* Value of coins to paper bills and vice versa	M2NS-If-21		√	√	√		
	* Amount of paper bills equivalent to the total number of coins with similar/different denomination	M2NS-If-21		√	√	√		
14	Counts money to pay specific items		LS2CP/NS-NS-PSB-LE/AE-14		√	√		
14.1	Counts and records the amount of money earned for the day, e.g., jeepney/tricycle driver/employees/ laborers		LS2CP/NS-NS-PSB-LE-14.1		√			
14.2	Records daily sales in a sari-sari store		LS2CP/NS-NS-PSB-LE-14.2		√			
15	Prepare an inventory of stocks and supplies in a sari-sari store or mini grocery		LS2CP/NS-NS-PSB-LE-15		√			

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
16	Gives the relationship between numbers using money values		LS2CP/NS-NS-PSB-LE/AE-16		√	√		
17	Ordinal numbers		LS2CP/NS-NS-PSB-LE-17		√			
17.1	Compares whole numbers using >, < and = symbols.	M1NS-Id- 6	LS2CP/NS-NS-PSB-LE-17.1		√			
	*compares prices using greater than/less than/equal to (>, <, =)				√			
	*compares the volume of harvested commodities using specific unit of measure				√			
	*compares numbers up to 100000 using relation symbols				√			
17.2	Reads and writes ordinal numbers (1st, 2nd, 3rd up to 10th) in a given set and use them to rank sets of objects, e.g.:	M1NS-Ii-17.1	LS2CP/NS-NS-PSB-BL-17.2	√				
	* results of contests in the community			√				
	* results of sports events			√				
	* results of elections (barangay, municipal, provincial and national)			√				
17.3	Uses ordinal numbers to rank sets of objects in everyday life, e.g.:		LS2CP/NS-NS-PSB-LE-17.3		√			
	*rank of person according to height/weight				√			
	* position of people lined up waiting to be served like in buying a ticket at a bus terminal, in a health center, etc.)				√			
	* relative position of candidates in a barangay election according to the number of votes cast				√			
	* rank of learners according to number of attendance				√			
17.4	Use of correct mathematical symbols (+, -, x, ,,<, >, =) in solving simple mathematical problems		LS2CP/NS-NS-PSB-LE-17.4		√			
18	Reads and writes Roman numbers		LS2CP/NS-NS-PSB-LE-18		√			

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	numbers on clocks				√			
	dates in Roman numbers				√			
18.1	Changes Roman numbers to equivalent Hindu-Arabic numbers or viceversa		LS2CP/NS-NS-PSB-LE-18.1		√			
19	Composes and decomposes a given number .e.g., 5 is 5 and 0; 4 is 1 and 3, and 2 and 2; and 3, 1, and 4, 0, and 5	M1NS-Ic-4	LS2CP/NS-NS-PSB-LE-19		√			
20	Adds and subtracts 1- and 2-digit whole numbers without regrouping, e.g.:		LS2CP/NS-NS-PSB-BL-20	√				
	* find the total number of vegetables of different kinds harvested from a backyard garden			√				
	*compute the number of vegetables sold from the total number harvested and unsold			√				
20.1	Adds and subtracts 2- to 4-digit whole numbers with regrouping, e.g.:		LS2CP/NS-NS-PSB-LE-20.1		√			
	*compute the total amount of expenses in harvesting specific commodity				√			
	* add the total cost of items bought in the market, sari-sari store or grocery				√			
	*compute the change for items bought				√			
20.2	Adds and subtracts 4- to 6-digit whole numbers or more with regrouping, e.g.:		LS2CP/NS-NS-PSB-LE-20.2		√			
	* compute the daily gross sales of a sari-sari store				√			
	*calculating daily profit/loss after deducting expenses from the gross sales on sari-sari store				√			
20.3	Represents and solves routine and nonroutine problems involving subtraction of whole numbers including money with minuends up to 99 with and without regrouping using appropriate problem-solving strategies and tools	M1NS-IIi-34.1	LS2CP/NS-NS-PSB-BL-20.3	√				
	*find the daily expenses of the family			√				

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
20.4	Creates situations involving addition of whole number including money	M1NS-Iie-30.2 M2NS-Ij-30.2	LS2CP/NS-NS-PSB-LE-20.4		√			
	*determine the sources of expenses of a common farmer and its production expenses in one harvest season				√			
20.5	20.5. Solves one-step problems related to daily life involving addition or subtraction without regrouping, e.g.:		LS2CP/NS-NS-PSB-LE-20.5		√			
	*total number of assorted fruits harvested				√			
	* determine the number of fruits sold from the total harvest and the unsold number of fruits				√			
21	Multiplies and divides a 1 to 2-digit whole number by a 1 digit number, e.g.:	M3NS-IIb-40.5	LS2CP/NS-NS-PSB-BL/LE-21	√	√			
	*compute the total number of eggs on 2 to 9 one-dozen trays			√	√			
	*compute the total fare of 3–9 persons in going to the market			√	√			
	* compute the equal share of each student on chocolate cookies			√	√			
	*compute the equal contribution of each family in community event			√	√			
21.1	Multiplies and divides a 2 to 3-digit whole number by a 1- to 2-digit number, e.g.:	M3NS-IIc-43.1 M3NS-IIh-54.1	LS2CP/NS-NS-PSB-LE-21.1		√			
	*computing the total cost of grocery items purchased				√			
	*computing the unit cost of school supplies bought (e. g., pencils, notebook, or ball pens)				√			
21.2	Multiplies and divides 3- to 5-digit whole numbers by a 2- to 3-digit whole number, e.g.:	M4NS-Ic-43.7 M4NS-If-54.3	LS2CP/NS-NS-PSB-LE/AE-21.2		√	√		
	*compute the total earning of a laborer based on his daily wage				√	√		

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	*compute the daily wage of a domestic helper based on her monthly income				√	√		
22	Applies knowledge of multiplication and division to solve daily problems		LS2CP/NS-NS-PSB-LE/AE-22		√	√		
23	Solves two-step problems involving 2- to 4-digit numbers using any two of the four fundamental operations, e.g.:		LS2CP/NS-NS-PSB-LE/AE-23		√	√		
	*After computing the total number of assorted canned goods donated, compute the equal share among the number of families in the barangay				√	√		
	*Solves problems involving multiple steps using the four fundamental operations, e.g.:				√	√		
	*After a laborer computed his total earnings for the week, he sets aside an amount for his daily fare, and divides the remaining amount for the allowance of his three children.				√	√		
24	Demonstrates an understanding of the order of operations of the four fundamental mathematical operations (+, -, x, ,) to solve problems with 3 or 4 steps applying the principle of MDAS, i. e., multiplication is done first before division and then addition; the last operation to be done is subtraction in the case of a 4-step problem, e.g.:	M4NS-Ii-61.1	LS2CP/NS-NS-PSB-AE-24			√		
	*total cost of goods purchased, profit from the selling price of goods, budgeting monthly expenses based on profits					√		
	*total distance travelled, number of liters of gasoline consumed, given an average speed – the number of hours to reach a specific place					√		
	* determining the total cost of items sold/bought					√		
	* budgeting the monthly income according to family needs					√		

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	* determining daily/weekly/monthly and annual income/salary					√		
	* determining the amount of monthly payments for a loan					√		
25	Solves problems involving multiple steps using the four fundamental operations, e.g.:		LS2CP/NS-NS-PSB-AE-25			√		
26	States, explains, and interprets Parenthesis, Multiplication, Division, Addition, Subtraction(PMDAS) or Grouping, Multiplication, Division, Addition, Subtraction (GMDAS) rule	M5NS-Ic-61.2	LS2CP/NS-NS-PSB-AE-26			√		
27	Simplifies a series of operations on whole numbers involving more than two operations using the PMDAS or GMDAS rule	M5NS-Id-62.2	LS2CP/NS-NS-PSB-AE/LS-27			√	√	
28	Demonstrates comprehension of whole numbers and their uses in everyday life		LS2CP/NS-NS-PSB-BL/LE/AE/LS/AS-28	√	√	√	√	√
29	Reads and writes fractions in symbols and in words	M1NS-IIIb-72.1	LS2CP/NS-NS-PSB-LE-29		√			
29.1	Uses fractions to name the equal parts of a whole, e.g.:	M1NS-IIIb-72.1 M1NS-IIIc-73	LS2CP/NS-NS-PSB-LE-29.1		√			
	*Identify the fractional part of a cake cut into four equal parts				√			
	*Identify the fraction illustrating the shaded part of a rectangular piece of land				√			
29.2	Identifies the different kinds of fractions		LS2CP/NS-NS-PSB-LE-29.2		√			
	*For similar fractions, e.g., Given a one-dozen tray of eggs, three eggs were used for baking. Identify the fraction form for the eggs used for baking and the fraction form for the eggs left in the tray.				√			

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	*For dissimilar fractions, e.g., Given two flower vases, in one vase there are 6 roses 3 of which are red on the other vase, there are 8 roses 5 of which are also red. Identify the fraction form of red roses in each vase.				√			
29.3	Compares fractions using the symbols >, < or =, e.g.:	M2NS-IIIe-77.1 M3NS-IIIa-72.4 M3NS-IIIb-76.3	LS2CP/NS-NS-PSB-LE/AE-29.3		√	√		
	*Given two bilaos of bibingka, one is divided into 4 equal parts and the other is divided into 8 equal parts. Two parts of the first bilao were served for the visitors and 4 parts of the other bilao were set aside for the barangay officials. Compare the fractional part of the bibingka that was served and set aside from the two bilaos.				√	√		
	*From the same example above, compare 1part from each of the bilaos. Which is greater/less?				√	√		
29.4	Adds and subtracts similar fractions and whole numbers, e.g.:	M4NS-IIf-82.1 M4NS-IIf-82.2	LS2CP/NS-NS-PSB-LE-29.4		√			
	*Given a rectangular rice field divided equally into 6parts, compute the total fractional part a farmer plowed in 2days if on the first day he finished 2parts and 3 parts on the second day				√			
	*With the computed total fractional part the farmer plowed in the above example, compute the remaining fractional part that was not yet plowed				√			
29.5	Demonstrates knowledge/understanding and skills related to fractions applying these skills in solving real life problems		LS2CP/NS-NS-PSB-AE-29.5			√		
29.6	Computes for the Least Common Denominator (LCD), Greatest Common Factor (GCF), and the lowest term of fractions		LS2CP/NS-NS-PSB-AE-29.6			√		

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
29.7	Adds and subtracts similar and dissimilar fractions including combinations with mixed numbers, e.g.:		LS2CP/NS-NS-PSB-LE/AE-29.7		√	√		
	*Given 3boxes of pizza divided equally into 8 parts, 1learning group consumed 5 parts of 1box and another group consumed 11 parts from the 2boxes. Compute the total fractional parts consumed by the 2learning groups.				√	√		
	*From the above example, compute the remaining fractional part that was not consumed by the first learning group.				√	√		
29.8	Get the reciprocal of fraction	M5NS-Ih-94	LS2CP/NS-NS-PSB-AE-29.8			√		
29.9	Multiplies and divides fractions including mixed numbers, e.g.:	M5NS-Ig-90.1 M5NS-Ii-96.1	LS2CP/NS-NS-PSB-AE-29.9			√		
	* A family estate is subdivided among three brothers and a surviving mother who is entitled to one-half of the whole estate. The remaining half is to be equally divided among her three sons. Compute the fractional part each son will own.					√		
30	Solves real-life problems involving fractions and mixed numbers, e.g.:		LS2CP/NS-NS-PSB-AE-30			√		
	* prices of fruit, vegetables, and meat					√		
	* sharing something with others, e.g. money, cake, box of chocolate or pizza, piece of land, etc.					√		
	* measuring ingredients for recipes (1/2 cup, 3/4 tbsp.)					√		
31	Identifies factors of a given number up to 100	M4NS-IIa-64	LS2CP/NS-NS-PSB-AE-31			√		
32	Identifies the multiples of a given number up to100	M4NS-IIa-65	LS2CP/NS-NS-PSB-AE-32			√		
33	Differentiates prime from composite numbers	M4NS-IIb-66	LS2CP/NS-NS-PSB-AE-33			√		

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
33.1	Writes a given number as a product of its prime factors	M4NS-IIb-67	LS2CP/NS-NS-PSB-AE-33.1			√		
33.2	Find the common factors and the greatest common factor (GCF) of two numbers using the following methods: listing, prime factorization, and continuous division	M4NS-IIc-68.1	LS2CP/NS-NS-PSB-AE-33.2			√		
33.3	Finds the common multiples and least common multiple (LCM) of two numbers using the following methods: listing, prime factorization, and continuous division	M4NS-IIc-69.1	LS2CP/NS-NS-PSB-AE-33.3			√		
34	Solves real-life problems involving GCF and LCM of 2 given numbers	M4NS-IId-70.1	LS2CP/NS-NS-PSB-AE-34			√		
34.1	Creates problems with reasonable answers involving GCF and LCM of 2 given numbers	M4NS-IId-71.1	LS2CP/NS-NS-PSB-AE-34.1			√		
35	Uses divisibility rules for 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 to find the common factors of numbers	M5NS-Ib-58.1 M5NS-Ib-58.2 M5NS-Ib-58.3	LS2CP/NS-NS-PSB-AE-35			√		
35.1	Solves routine and nonroutine problems involving factors, multiples, and divisibility rules for 2,3,4,5,6,8,9,10,11, and12.	M5NS-Ic-59	LS2CP/NS-NS-PSB-AE-35.1			√		
35.2	Creates problems (with reasonable answers) involving factors, multiples, and divisibility rules	M5NS-Ic-60	LS2CP/NS-NS-PSB-AE-35.2			√		
36	Finds the common factors and the GCF of 2–4 numbers using continuous division	M5NS-Id-68.2	LS2CP/NS-NS-PSB-AE-36			√		
36.1	Finds the common multiples and LCM of 2–4 numbers using continuous division	M5NS-Id-69.2	LS2CP/NS-NS-PSB-AE-36.1			√		
36.2	Solves real-life problems involving GCF and LCM of 2–3 given numbers	M5NS-Ie-70.2	LS2CP/NS-NS-PSB-AE-36.2			√		
36.3	Creates problems (with reasonable answers) involving GCF and LCM of 2–3 given numbers	M5NS-Ie-71.2	LS2CP/NS-NS-PSB-AE-36.3			√		
37	Reads and writes decimals in words and symbols, e.g.:	M4NS-IIj-102.1	LS2CP/NS-NS-PSB-AE-37			√		

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
	* Given 15.378, write the number in words					√		
	* Given four hundred twenty one and nine tenths, write the number in symbols.					√		
38	Identifies the place value and value of the digits of a decimal, e.g.:	M4NS-IIi-101.1	LS2CP/NS-NS-PSB-AE-38			√		
	*Given twelve grapefruits to sell and an additional half given to the vendor, identify the decimal number that represents the grapefruits and the place value of each digit (12.5)					√		
	*Given three boxes of buko pie, the two boxes are full and the third contains only three-fourths. Identify the decimal number that represents the buko pie and the place of each digit (2.75)					√		
39	Compares the value of the digits of a decimal, e.g.:	M4NS-IIj-104.1	LS2CP/NS-NS-PSB-AE-39			√		
	*Given 13.003, compare the value of the underlined digits					√		
	*Given 5.66, compare the value of the underlined digits.					√		
40	Round off decimals, e.g.:	M4NS-IIj-103.1	LS2CP/NS-NS-PSB-AE-40			√		
	*One ream of bond paper contains 500 sheets. If the printer needs 2,300 sheets, how many reams of bond paper does he need to buy? (He needs 4.6 reams.)					√		
	*An NFE A&E secondary level learner got a general average of 85.4 in his elementary level work in the formal school. What is his average rounded off to the nearest whole number?					√		
41	Rounds decimal numbers to the nearest hundredth and thousandth	M5NS-IIa-103.2	LS2CP/NS-NS-PSB-AE-41			√		

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
42	Visualizes decimal numbers using models like blocks, grids, number lines and money to show the relationship to fractions	M4NS-IIi-99	LS2CP/NS-NS-PSB-AE-42			√		
43	Converts decimals into fractions and vice versa, e.g.:	M4NS-IIi-100	LS2CP/NS-NS-PSB-AE-43			√		
	*0.06 test takers passed the test is the same as 6 out of every 100 test takers or 6/100					√		
	*3/10 of the NFE A&E learners completed the learning sessions is the same as 3 out of every ten learners or 0.3.					√		
44	Adds and subtracts decimals, e.g.:	M6NS-Id-106.2	LS2CP/NS-NS-PSB-AE-44			√		
	* Compute the total number of kilos of cabbage harvested					√		
	* Compute the difference of the distance of two barangays from the poblacion					√		
45	Demonstrates knowledge understanding and skills related to decimals by applying these skills in solving real life problems		LS2CP/NS-NS-PSB-AE-45			√		
46	Solves 1or more steps routine and nonroutine problems involving addition and/or subtraction of decimals and mixed decimals using appropriate problem-solving strategies and tools	M6NS-Id-108.2	LS2CP/NS-NS-PSB-AE-46			√		
47	Multiplies mentally decimals up to2 decimals places by 0.1, 0.01, 10, and 100.	M6NS-Ie-111.4	LS2CP/NS-NS-PSB-AE-47			√		
48	Visualizes division of decimal numbers using pictorial models	M5NS-IIf-115	LS2CP/NS-NS-PSB-AE-48			√		
49	Multiplies and divide decimals, e.g.:	M5NS-IId-111.2 M5NS-IIf-116.1	LS2CP/NS-NS-PSB-AE-49			√		
	*Compute the total length of material needed for fencing					√		

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
	*Compute the equal distribution of tasks of students in a group work					√		
50	Divides decimals up to 4 decimal places by 0.1, 0.01, and 0.001	M6NS-Ih-116.5	LS2CP/NS-NS-PSB-AE-50			√		
51	Divides decimals up to 2 decimal places by 10,100, and 1000 mentally	M6NS-Ih-118	LS2CP/NS-NS-PSB-AE-51			√		
52	Differentiates terminating from repeating, nonterminating decimal quotients	M6NS-Ii-119	LS2CP/NS-NS-PSB-AE-52			√		
53	Solves problems in daily life involving decimals that are money related, e.g.:	M6NS-Ii-120.2	LS2CP/NS-NS-PSB-AE-53			√		
	* preparing a family budget					√		
	* calculating marketing expenses					√		
	* computing daily/weekly and monthly wages					√		
	* adding income/expenses and computing profit/loss					√		
	* preparing a financial statement/balance sheet					√		
54	Reads and writes pesos and centavos in words and symbols	M3NS-Ic-20.2	LS2CP/NS-NS-PSB-AE-54			√		
54.1	Adds and subtracts decimals in money form, e.g.:		LS2CP/NS-NS-PSB-AE-54.1			√		
	*giving change					√		
	*borrowing/lending money					√		
	*computing the cost of postage when sending letters					√		
	*depositing/withdrawing money					√		
54.2	Multiplies and divides decimals involving money, e.g.:		LS2CP/NS-NS-PSB-AE-54.2			√		
	* total cost of goods purchased					√		
	* giving equal amount of money among the children					√		

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
55	Creates problems (with reasonable answers) involving division without or with any of the other operations of decimals, mixed decimals, and whole numbers including money	M6NS-Ij-121.2	LS2CP/NS-NS-PSB-AE-55			√		
56	Reads and writes ratios and proportions in words and symbols, e.g.:	M5NS-IIh-122 M5NS-IIh-123	LS2CP/NS-NS-PSB-AE-56			√		
	*one stick to two bananas (1: 2, or one is to two)					√		
	*twenty-five learners to one Instructional Manager (twenty-five is to one or 25:1)					√		
57	Gives examples of real life relationships in the form of ratio and proportion, e.g.:		LS2CP/NS-NS-PSB-AE-57			√		
	*the ratio of passengers to the seating capacity of a jeepney					√		
	*the ratio of modules to learners					√		
	*the ratio of the number of learners to Instructional Managers					√		
	*the ratio of graduates to the number of persons actually employed in one's community					√		
	* the ratio of birth rate to death rate per year in one's barangay					√		
	*the ratio and proportion of males and females in a barangay population					√		
57.1	Explains the meaning of ratio and proportion and how they are related	M6NS-IIb-131	LS2CP/NS-NS-PSB-AE-57.1			√		
58	Identifies equivalent ratios, e.g.:	M5NS-IIi-124	LS2CP/NS-NS-PSB-AE-58			√		
	* 1 Instructional Manager : 25 learners is the same as 2:50					√		
	* 4 scoops of powdered milk : 2 cups of water is the same as 8: 4					√		

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
59	Expresses one value as a fraction of another given their ratio and vice versa	M6NS-IIa-129	LS2CP/NS-NS-PSB-AE-59			√		
60	Finds how many times one value is as large as another given their ratio and viceversa	M6NS-IIa-130	LS2CP/NS-NS-PSB-AE-60			√		
61	Simplifies ratio to its lowest term, e.g.:		LS2CP/NS-NS-PSB-AE-61			√		
61	*The ratio of male to female in a learning group is 5:10 which is 1:2 in lowest term					√		
61	*The ratio of the number of eggs to number of cups of flour for baking is 8:12, which is 2:3 in lowest term					√		
62	Converts ratio to fractions and vice versa, e.g.:		LS2CP/NS-NS-PSB-AE-62			√		
62	*The ratio of buses to jeepneys is 25:75, which is 25/75 in fraction form					√		
62	*The ratio of roosters to mother hens in the backyard poultry is 9/26, which is 9:26 in ratio form					√		
63	Differentiates between ratio and rate, e.g.:		LS2CP/NS-NS-PSB-AE-63			√		
63	*the number of cups of salt to the number of cups of fish (*dilis*) in making *bagoong* (ratio)					√		
63	*the number of dresses a dressmaker can sew per day (rate)					√		
64	Solves daily life problems involving ratio and proportion and rate, e.g.:		LS2CP/NS-NS-PSB-AE-64			√		
64	*cost of one piece of fruit based on its cost per dozen					√		
64	*cost of a cavan of rice based on price per kilo					√		
64	*number of words a secretary can type during a given period of time based on the number of words she can type per minute					√		

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	*distance traveled by a car in kilometer/mile per liter of fuel consumed					√		
65	Creates problems involving ratio and proportion, with reasonable answers	M6NS-IIc-135	LS2CP/NS-NS-PSB-AE-65			√		
66	Solves problems involving direct proportion, partitive proportion, and inverse proportion in different contexts such as distance, rate, and time using appropriate strategies and tools	M6NS-IIc-134	LS2CP/NS-NS-PSB-AE-66			√		
67	Finds a missing term in a proportion (direct, inverse, and partitive).	M6NS-IIb-133	LS2CP/NS-NS-PSB-AE-67			√		
68	Demonstrates knowledge of ratio and proportion as applied in solving real-life problems		LS2CP/NS-NS-PSB-AE-68			√		
69	Explains the meaning of percent and percentage and its practical application in everyday life	M5NS-IIIa-136	LS2CP/NS-NS-PSB-AE/LS-69			√	√	
70	Converts percent to decimals and viceversa		LS2CP/NS-NS-PSB-AE/LS-70			√	√	
71	Converts percent to fractions and viceversa		LS2CP/NS-NS-PSB-AE/LS-71			√	√	
72	Solves daily life problems involving percent and percentages, e.g.:		LS2CP/NS-NS-PSB-AE/LS-72			√	√	
	*buying in cash vs. installment					√	√	
	*family budget					√	√	
	*commission on sales					√	√	
	*discount on mark-up prices					√	√	
	*taxes, e.g., income tax, VAT					√	√	
	*interest rates on loans including the "5-6" scheme, savings account and time deposit					√	√	
	* mixing chemicals using the correct proportion, e.g., chemical fertilizers					√	√	

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
73	Creates problems involving percent, with reasonable answers	M5NS-IIIb-141	LS2CP/NS-NS-PSB-AE/LS-73			√	√	
74	Demonstrates knowledge and skills on percent and percentage in solving real-life problems	M5NS-IIIb-140	LS2CP/NS-NS-PSB-AE/LS-74			√	√	
75	Defines set and other related terms	M7NS-Ia-1	LS2CP/NS-NS-PSB-LS-75				√	
76	Discusses the different kinds of sets	M7NS-Ia-1	LS2CP/NS-NS-PSB-LS-76				√	
77	Finds the subset of a given set		LS2CP/NS-NS-PSB-LS-77				√	
78	Determines the total number of subsets of a given set		LS2CP/NS-NS-PSB-LS-78				√	
79	Determines whether a given set is joint or disjoint		LS2CP/NS-NS-PSB-LS-79				√	
80	Determines whether a given set is equal or equivalent		LS2CP/NS-NS-PSB-LS-80				√	
81	Determines the union of two sets	M7NS-Ia-2	LS2CP/NS-NS-PSB-LS-81				√	
82	Determines the intersection of two sets	M7NS-Ia-2	LS2CP/NS-NS-PSB-LS-82				√	
83	Demonstrates skills in operation on sets		LS2CP/NS-NS-PSB-LS-83				√	
84	Gets the difference between the two sets	M7NS-Ia-2	LS2CP/NS-NS-PSB-LS-84				√	
85	Gets the complement of a set		LS2CP/NS-NS-PSB-LS-85				√	
86	Solves problems in real life using Venn diagrams	M7NS-Ib-1	LS2CP/NS-NS-PSB-LS-86				√	
87	Defines and classifies real numbers		LS2CP/NS-NS-PSB-LS-87				√	

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
88	Describes and draws a number line	M7NS-Ic-1	LS2CP/NS-NS-PSB-LS-88				√	
89	Shows the different sets of real numbers on a number line	M7NS-Ic-1	LS2CP/NS-NS-PSB-LS-89				√	
90	Determines the properties of real numbers		LS2CP/NS-NS-PSB-LS-90				√	
91	Finds the absolute value of a number	M7NS-Ic-1	LS2CP/NS-NS-PSB-LS-91				√	
92	Performs operations dealing with absolute values		LS2CP/NS-NS-PSB-LS-92				√	
93	Describes the set of integers		LS2CP/NS-NS-PSB-LS-93				√	
94	Compares integers with other numbers such as whole numbers, fractions, and decimals	M7NS-Ie-1	LS2CP/NS-NS-PSB-LS-94				√	
95	Reads and writes positive and negative numbers on number line		LS2CP/NS-NS-PSB-LS-95				√	
96	Adds integers using the number line		LS2CP/NS-NS-PSB-LS-96				√	
97	Adds and subtracts positive and negative numbers.		LS2CP/NS-NS-PSB-LS-97				√	
98	Applies knowledge of addition and subtraction of integers in solving daily problems, e.g.:		LS2CP/NS-NS-PSB-LS-98				√	
98	* add positive and negative money values in a profit/loss statement						√	
98	* prepare a balance sheet comparing budgeted line items and actual expenses						√	
99	Performs multiplication and division of integers		LS2CP/NS-NS-PSB-LS-99				√	
100	Applies knowledge of multiplication and division of integers to solve daily problems, e.g.:		LS2CP/NS-NS-PSB-LS-100				√	
100	* prepare an annual financial statement of sale						√	

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	* determine sale items with a negative return of profit and calculate total losses and losses per item						√	
101	Solves routine and nonroutine problems involving basic operations of integers using appropriate strategies and tools		LS2CP/NS-NS-PSB-LS-101				√	
102	Applies knowledge involving integers to solve problems in daily life	M7NS-Ii-2	LS2CP/NS-NS-PSB-LS-102				√	

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: Mathematical and Problem Solving Skills

Content Standard: Numeracy Skills
Performance Standard: Acquire mathematical skills for personal and social effectiveness.
Performance Standard C: Demonstrate knowledge and skills involving geometric shapes/figures and its application to daily lives.

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
1	Represents point, line, and plane using concrete and pictorial models	M7GE-IIIa-1	LS2CP/NS-NS-PSC-LE-1		√			
1.1	Identify objects that represent point, line and plane such as paper, rope, farm land, wall, ceiling, etc.		LS2CP/NS-NS-PSC-LE-1.1		√			
1.2	Illustrates subsets of a line	M7GE-IIIa-2	LS2CP/NS-NS-PSC-LE-1.2		√			
2	Illustrates different types of lines such as perpendicular, parallel and intersecting lines	M4GE-IIIa-12.2 M3GE-IIIf-12.1	LS2CP/NS-NS-PSC-LE-2		√			
2.1	Identify different types of lines such as perpendicular, parallel, and intersecting lines in real objects		LS2CP/NS-NS-PSC-LE-2.1		√			
3	Draws congruent line segments	M3GE-IIIf-13	LS2CP/NS-NS-PSC-LE-3		√			
3.1	Identifies congruent line segments	M3GE-IIIf-13	LS2CP/NS-NS-PSC-LE-3.1		√			
4	Identifies plane figures, e.g., triangle, square, rectangle, circle.	M1GE-IIIe-1 M4GE-IIIc-17 M5GE-IIIc-19	LS2CP/NS-NS-PSC-LE-4		√			
4.1	Tessellates the plane using triangles, squares, and other shapes	M2GE-IIIi-8.2 M3GE-IIIh-8.3	LS2CP/NS-NS-PSC-LE-4.1		√			
	* identify real objects thatare examples of tesselation such as tiles, roof				√			
4.2	Describes geometric shapes at home and workplace; e. g. shape of furniture, shape of the roof	M4GE-IIIb-15	LS2CP/NS-NS-PSC-BL/LE/AE-4.2	√	√	√		

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
5	Applies the principles of geometric shapes in daily life situations	M9GE-IVe-1	LS2CP/NS-NS-PSC-LE/AE/LS/AS-5		√	√	√	√
6	Relates geometric ideas to number and measurement ideas, including the concepts of perimeter, area, volume, angle measure, capacity, weight, and mass		LS2CP/NS-NS-PSC-LE/AE/LS/AS-6		√	√	√	√
7	Uses a variety of tools and technologies to study geometry, e.g., ruler, protractor, compass, software	M1GE-IIIf-4 M2GE-IIIg-6 M4ME-IIIh-49	LS2CP/NS-NS-PSC-LE/AE/LS/AS-7		√	√	√	√
8	Identifies the line of symmetry in a given symmetrical figure	M2GE-IIIh-7.4a M3GE-IIIg-7.4	LS2CP/NS-NS-PSC-LE-8		√			
	* identify the line of symmetry of a butterfly				√			
	* identify the line of symmetry of a given object				√			
8.1	Draws the line of symmetry in a given symmetrical figure	M3GE-IIIg-7.4	LS2CP/NS-NS-PSC-LE-8.1		√			
8.2	Completes a symmetric figure with respect to a given line of symmetry	M3GE-IIIh-7.5	LS2CP/NS-NS-PSC-LE-8.2		√			
8.3	Differentiates symmetrical from asymmetrical shapes in furniture, houses, and buildings		LS2CP/NS-NS-PSC-LE-8.3		√			
9	Illustrates an angle	M4GE-IIIb-14 M7GE-IIIe-2	LS2CP/NS-NS-PSC-AE-9			√		
9.1	Draws different types of angles found in the objects used in daily life, e.g., right angles, acute angles, obtuse angles	M4GE-IIIb-14	LS2CP/NS-NS-PSC-AE-9.1			√		
9.2	Measures angles found in geometric shapes using a protractor, e.g.:		LS2CP/NS-NS-PSC-AE/LS-9.2			√	√	
	· sawing of lumber						√	√
	· laying of floor tiles						√	√
	· drawing pie graphs						√	√
	· following a sewing pattern						√	√
	· constructing furniture						√	√
	· welding metals						√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
10	Converts the given measurement of an angle to unit degrees or radians and viceversa		LS2CP/NS-NS-PSC-LS/AS-10				√	√
11	Classifies triangles according to measure of its angles and sides	M4GE-IIIb-16	LS2CP/NS-NS-PSC-AE-11			√		
11.1	Identifies and describes triangles according to sides and angles using concrete objects	M4GE-IIIc-16	LS2CP/NS-NS-PSC-AE-11.1			√		
12	Describes the attributes/properties of triangles and quadrilaterals using concrete objects or models	M4GE-IIIb-15	LS2CP/NS-NS-PSC-AE-12			√		
12.1	Describes the different kinds of quadrilaterals and its properties: square, rectangle, parallelogram, trapezoid, and rhombus	M4GE-IIIc-17	LS2CP/NS-NS-PSC-AE-12.1			√		
12.2	Identifies the different kinds of quadrilaterals: square, rectangle, parallelogram, trapezoid, and rhombus on many objects such as wall, roof, field, etc.	M4GE-IIIc-17	LS2CP/NS-NS-PSC-AE-12.2			√		
13	Relates triangles to quadrilaterals	M4GE-IIId-18.1	LS2CP/NS-NS-PSC-AE-13			√		
13.1	Relates one quadrilateral to another quadrilateral (e.g. square to rhombus)	M4GE-IIId-18.2	LS2CP/NS-NS-PSC-AE-13.1			v		
14	Describes polygons with 5 or more sides	M5GE-IIIc-19	LS2CP/NS-NS-PSC-AE-14			√		
14.1	Name polygons according to number of sides	M5GE-IIIc-19	LS2CP/NS-NS-PSC-AE-14.1			√		
14.2	Draws polygons with 5 or more sides	M5GE-IIIc-21	LS2CP/NS-NS-PSC-AE-14.2			√		
14.3	Constructs triangles, squares, rectangles, regular pentagons, and regular hexagons	M7GE-IIIh-i1	LS2CP/NS-NS-PSC-AE/LS-14.3			√	√	
15	Describes and compares properties of polygons (regular and irregular polygons)	M5GE-IIIc-20	LS2CP/NS-NS-PSC-AE-15			√		
15.1	Describe congruent polygons	M5GE-IIId-22	LS2CP/NS-NS-PSC-AE-15.1			√		

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
16	Illustrates polygons: (a) convexity, (b) angles, and (c) sides	M7GE-IIIe-2	LS2CP/NS-NS-PSC-LS-16				√	
17	Derives inductively the relationship of exterior and interior angles of a convex polygon	M7GE-IIIf-1	LS2CP/NS-NS-PSC-LS-17				√	
18	Illustrates a circle and the terms related to it: radius, diameter chord, center, arc, chord, central angle, and inscribed angle	M7GE-IIIg-1	LS2CP/NS-NS-PSC-LS-18				√	
18.1	Draws circles with different radius using compass	M5GE-IIIe-24	LS2CP/NS-NS-PSC-LS-18.1				√	
19	Describes solid figures	M5GE-IIIe-25	LS2CP/NS-NS-PSC-AE-19			√		
19.1	Describes the different solid figures: cube, prism, pyramid, cylinder, cone, and sphere	M6GE-IIIa-27	LS2CP/NS-NS-PSC-AE-19.1			√		
19.2	Differentiates plane from surface figures (2D and 3D objects)	M6GE-IIIa-28	LS2CP/NS-NS-PSC-AE-19.2			√		
19.3	Illustrates the different solid figures using various concrete and pictorial models	M6GE-IIIb-29	LS2CP/NS-NS-PSC-AE/LS-19.3			√	√	
19.4	Makes models of different solid figures—cube, prism, pyramid, cylinder, cone, and sphere—using plane figures	M5GE-IIIe-26	LS2CP/NS-NS-PSC-AE-19.4			√		
19.5	Identifies the faces of a solid figure	M6GE-IIIa-28	LS2CP/NS-NS-PSC-AE-19.5			√		
20	The Pythagorean Theorem and its application in real life situations	M9GE-IIIi-2	LS2CP/NS-NS-PSC-AS-20					√
21	The six trigonometric ratios	M9GE-IVa-1	LS2CP/NS-NS-PSC-AS-21					√
22	Illustrates angle of elevation and angle of depression	M9GE-IVd-1	LS2CP/NS-NS-PSC-AS-22					√
23	Illustrates the law of sines and law of cosines	M9GE-IVf-g-1	LS2CP/NS-NS-PSC-AS-23					√
23.1	Application of trigonometric ratios and law of sines and cosines in real-life situations	M9GE-IVe-1	LS2CP/NS-NS-PSC-AS-23.1					√

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	*finding the height of a tree/house/mountain							√
	*finding the distance of the boat from the shore							√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: Mathematical and Problem Solving Skills

Content Standard: Numeracy Skills
Performance Standard: Acquire mathematical skills for personal and social effectiveness.
Performance Standard D: Demonstrate knowledge and skills in using measuring devices in solving real life problems.

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
1	Shows appreciation of indigenous measurement technologies used by different cultures, e.g.: · linear – dipa, dangkal, piye, hakbang · weight – kilo, guhit · volume – ganta, bilao, lata, chupa		LS2CP/NS-NS-PSD-LE/AE/LS/AS-1		√	√	√	√
2	Takes and records linear measurements, e.g., width, length, height, distance using rulers, tape measures, meter sticks and indigenous measuring devices		LS2CP/NS-NS-PSD-LE/AE/LS/AS-2		√	√	√	√
2.1	Uses appropriate units of length and distances for measurement, e.g., millimeter (mm), centimeter (cm), inch, feet (ft.), yard, meter (m), kilometer (km), and mile (mi).	M2ME-IVb-23 M3ME-IVb-39	LS2CP/NS-NS-PSD-LE/AE/LS/AS-2.1		√	√	√	√
2.2	Compares the reliability and accuracy of linear measurements of objects using standard units, e.g., mm, cm, ft, m with indigenous ways, e.g., dangkal, dipa, piye, hakbang		LS2CP/NS-NS-PSD-LE/AE/LS/AS-2.2		√	√	√	√
2.3	Converts smaller units of length to bigger units and vice versa, e.g., meter to kilometer, centimeter to meter, centimeter to millimeter, inches to feet, yards to feet		LS2CP/NS-NS-PSD-LE/AE/LS/AS-2.3		√	√	√	√
2.4	Converts one standard unit of length to another and vice versa, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-2.4		√	√	√	√
	*inches to centimeters/millimeters e.g., when buying timber, nails or screws)				√	√	√	√
	* yards to meters e.g., when buying materials for a dress or curtains				√	√	√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
3	Applies the formula for computing perimeter and circumference	M4ME-IIIi-49 M5ME-IIIh-68	LS2CP/NS-NS-PSD-LE/AE/LS/AS-3		√	√	√	√
3.1	Explains the meaning of perimeter and its practical applications in daily life		LS2CP/NS-NS-PSD-LE/AE-3.1		√	√		
3.2	Computes the perimeter of different geometric shapes in everyday life, e.g.:	M4ME-IIIi-51	LS2CP/NS-NS-PSD-LE/AE/LS/AS-3.2		√	√	√	√
	* perimeter of a regular polygons like window frame, door, rectangular garden to estimate the fencing materials needed				√	√	√	√
	* perimeter of a regular or an irregular polygon-shaped lot for estimating the length of fencing materials needed, e.g., ricefield, vegetable garden, fishpond				√	√	√	√
4	Explains the meaning of circumference and related terms like radius, diameter and its practical applications in daily life situations, e.g.: * length of metal edging needed for a circular table * distance jogged by an athlete in an oval		LS2CP/NS-NS-PSD-LE/AE/LS/AS-4		√	√	√	√
4.1	Computes the diameter, radius and circumference of a circle using the value of pi (p)		LS2CP/NS-NS-PSD-LE/AE/LS/AS-4.1		√	√	√	√
5	Applies knowledge and skills in solving daily life problems involving linear measurement, perimeter, and circumference of objects		LS2CP/NS-NS-PSD-LE/AE/LS/AS-5		√	√	√	√
6	Explains the meaning of area and its practical application in real life situations, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-6		√	√	√	√
	* the number of square units of cloth to cover a dining table				√	√	√	√
	* the number of square tiles needed to cover the floor area of a living room				√	√	√	√
	* given the length and the width of a ricefield, find its total area				√	√	√	√

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
6.1	Differentiates perimeter from area	M4ME-IIIi-52	LS2CP/NS-NS-PSD-LE/AE/LS/AS-6.1		√	√	√	√
6.2	Identifies units of measurement, e.g., square meters, square kilometers, hectares		LS2CP/NS-NS-PSD-LE/AE/LS/AS-6.2		√	√	√	√
6.3	Uses the appropriate units of measure in measuring area	M3ME-IVd-43	LS2CP/NS-NS-PSD-LE/AE/LS/AS-6.3		√	√	√	√
6.4	Converts smaller units of area to bigger units and vice versa, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-6.4		√	√	√	√
	· square meters to hectares (measuring a piece of land)				√	√	√	√
	· square meters to square foot (determining the number of tiles needed based on computed floor area)				√	√	√	√
6.5	Converts one standard unit of area in the English to the metric system and vice versa, e.g., square feet to square meters, square meters to acres, square inches to square centimeters		LS2CP/NS-NS-PSD-LE/AE/LS/AS-6.5		√	√	√	√
7	Solves routine and nonroutine problems involving area of composite figures formed by any two or more of the following: triangle, square, rectangle, circle, and semicircle	M6ME-IIIh-90	LS2CP/NS-NS-PSD-LE/AE/LS/AS-7		√	√	√	√
8	Determines the area of a square and a rectangle with the use of square objects representing standard square units and compute the same applying the appropriate formulae for the same plane figures, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-8		√	√	√	√
	* finding the number of square objects representing square inch to cover a book							
	* finding the number of square objects representing square decimeters to cover a rectangular table							
	* computing for the area of the bathroom in square decimeters to determine the number of tiles to be used of the same square unit							
	* computing for the area of a square table to determine the number of square place mats to cover it							

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
9	Finds the area of irregular plane figures made up of squares and rectangles using sq.cm, sq.m. and sq.ft.	M4ME-IIIj-55	LS2CP/NS-NS-PSD-LE/AE/LS/AS-9		√	√	√	√
9.1	Estimates the area of irregular plane figures made up of squares and rectangles	M4ME-IVa-56	LS2CP/NS-NS-PSD-LE/AE/LS/AS-9.1		√	√	√	√
10	Uses appropriate formula in solving daily life problems involving the area of plane figures: square, rectangle, triangle, parallelogram, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-10		√	√	√	√
	*given the area of a particular room, and floor tiles of certain dimensions, compute for the number of tiles needed to tile the floor				√	√	√	√
	* given a farmland of a particular size and a recommended number of seedlings per hectare, estimate the number of seedlings needed to fully plant the area				√	√	√	√
	* given the dimensions of a family estate that has an irregular shape, compute for its area as basis for the computation of real estate taxes				√	√	√	√
	* given a certain floor area in a chicken hatchery/poultry farm and the minimum space needed per chicken, compute for the cage area requirements and the optimum layout of cages on site				√	√	√	√
11	Derives the formula for the area of triangles, parallelograms, and trapezoids	M4ME-IVb-57	LS2CP/NS-NS-PSD-LE/AE/LS/AS-11		√	√	√	√
12	Creates problems (with reasonable answers) involving area involving squares, rectangles, triangles, parallelograms, and trapezoids	M4ME-IVb-61	LS2CP/NS-NS-PSD-LE/AE/LS/AS-12		√	√	√	√
13	Applies knowledge and skills in measurement in solving daily life problems on area		LS2CP/NS-NS-PSD-LE/AE/LS/AS-13		√	√	√	√
14	Derives a formula in finding the area of a circle	M5ME-IVa-73	LS2CP/NS-NS-PSD-LE/AE/LS/AS-14		√	√	√	√
14.1	Finds the area of a given circle	M5ME-IVa-74	LS2CP/NS-NS-PSD-LE/AE/LS/AS-14.1		√	√	√	√

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
14.2	Solves routine and nonroutine problems involving the area of a circle	M5ME-IVb-75	LS2CP/NS-NS-PSD-LE/AE/LS/AS-14.2		√	√	√	√
14.3	Creates problems involving a circle	M5ME-IVb-76	LS2CP/NS-NS-PSD-LE/AE/LS/AS-14.3		√	√	√	√
15	Explains the meaning of surface area and its practical application, e.g., estimating the amount of wrapping paper for a gift in a square or rectangular box.		LS2CP/NS-NS-PSD-LE/AE/LS/AS-15		√	√	√	√
15.1	Describes surface area and names the unit of measure used for measuring the surface area of solid/space figures	M6ME-IIIi-91	LS2CP/NS-NS-PSD-LE/AE/LS/AS-15.1		√	√	√	√
15.2	Finds the surface area of cubes, prisms, pyramids, cylinders, cones, and spheres	M6ME-IIIi-93	LS2CP/NS-NS-PSD-LE/AE-15.2		√	√		
15.3	Creates problems involving surface area and volume of solid/space figures, with reasonable answers	M6ME-IVc-99	LS2CP/NS-NS-PSD-LE/AE-15.3		√	√		
15.4	Uses appropriate formula involving problems on surface area, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-15.4				√	√
	*compute for the amount of paint needed to coat the surface area of a cylindrical water tank							
	* compute for the surface area of a cube to estimate the number of sheets of Manila paper to wrap it							
16	Computes for the volume of spatial figures		LS2CP/NS-NS-PSD-LE/AE/LS/AS-16		√	√	√	√
16.1	Compares the concept of area with that of volume in terms of figures, dimensions, unit of measurements, total outside surface or bulk/fullness, formulae for computation, etc.		LS2CP/NS-NS-PSD-LE/AE/LS/AS-16.1		√	√	√	√
16.2	Identifies practical applications of volume e.g., cubic centimeters (cc), milliliters (ml), cubic meters, cubic inches, cubic feet, liters, gallons, pints and fluid oz., e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-16.2		√	√	√	√
	* liquid medicine and vitamins for children per prescribed dose, bottles for preparing infant milk formula, measuring the ingredients of a recipe, etc.				√	√		

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	* amount of water needed to fill a cylindrical tank						√	√
16.3	Measures, reads and records measures of volume using standard equipment and indigenous measures; e. g., one liter of coke and one ganta of corn/rice		LS2CP/NS-NS-PSD-LE/AE/LS/AS-16.3		√	√	√	√
16.4	Converts smaller units of volume to bigger units and viceversa, e.g., milliliters(ml) to liters (L) or L to ml, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-16.4		√	√	√	√
	* teaspoon or tablespoon to milliliters (giving medication to sick people or using it in cooking)				√	√		
	* find out how many bottles of 500 ml softdrinks are equivalent to 1-liter bottle						√	√
	* find out how many 8-oz bottles are equivalent to a gallon of kerosene						√	√
16.5	Converts one standard unit of volume from the English to the metric system and vice versa, e.g.:	M7ME-IIb-1	LS2CP/NS-NS-PSD-LE/AE/LS/AS-16.5		√	√	√	√
	* ml to oz. (baby's milk formula)				√	√	√	√
	* quarts to liters (cooking oil, plastic roof cement)				√	√	√	√
	* gallons to liters (buying paints).				√	√	√	√
	* pints to liters (buying milk or other fluids).				√	√	√	√
17	17. Approximates measurement of volume in everyday use, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-17		√	√	√	√
	* number of cups of flour needed in baking				√	√	√	√
	* number of liters of milk/water consumed				√	√	√	√
	* number of liters/gallons of gasoline needed to refill the tank of a motorcycle/habal-habal/tricycle/car				√	√	√	√
18	Uses appropriate formula to find the volume of various solids, e.g., cylinders, cubes, rectangular prisms, spheres, etc. in solving everyday problems, like:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-18		√	√	√	√
	* mixture of water and insecticide for proper use on a given area							
	* the number of liters of water needed for daily consumption							

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	* consumption of gasoline/kerosene/diesel per day with the idea of reducing cost or making some savings							
	* volume of stones in making dams/breakwaters							
	* floor area and ceiling height to determine storage capacity for various items, e.g., harvested crops, store furniture, packing cases							
	* output of quarrying in cubic meters based on land area							
19	Uses indigenous measures to estimate the volume of objects, e.g.		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-19	√	√	√	√	√
	* number of cups equivalent to the content of one ganta				√	√	√	√
	* pails of water and their equivalent in gallons/liters used in household chores				√	√	√	√
20	Demonstrates understanding of the meaning of mass/weight		LS2CP/NS-NS-PSD-LE/AE/LS/AS-20		√	√	√	√
21	Read and record measures of mass/weight of objects using standard measuring devices and indigenous ways, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-21		√	√	√	√
	* for determining weight of children, pregnant women				√	√	√	√
	* for eating – rice, fish, meat, fruits, vegetables					√	√	√
	* for baking – flour, sugar, milk, salt, oil				√	√	√	√
	* for construction – sand, cement				√	√	√	√
22	Estimates mass/weight by lifting and by comparing familiar objects considering the shape, diameter, and height of other containers to determine if the seller gives the right amount of materials for the money paid		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-22	√	√	√	√	√
22.1	Explains the meaning of mass/weight and its practical application		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-22.1	√	√	√	√	√
22.2	Uses appropriate units of measurement of weight, e.g., grams (gm), kilograms (kg), tons (t), pounds (lbs.), ounces (oz.)	M2ME-IVe-31	LS2CP/NS-NS-PSD-LE/AE/LS/AS-22.2		√	√	√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
22.3	Converts smaller units of weight/mass to bigger units and viceversa, e.g., grams to kilograms, kilograms to tons		LS2CP/NS-NS-PSD-LE/AE/LS/AS-22.3		√	√	√	√
22.4	Converts standard units of weight/mass from the English to the metric system and viceversa, e.g.:	M7ME-IIb-1	LS2CP/NS-NS-PSD-LE/AE/LS/AS-22.4		√	√	√	√
	* pounds to kilograms when measuring weight of persons							
	* ounces/pounds to grams/kilograms when buying fish, flour, sugar, rice							
22.5	Compares weights using standard and indigenous measures; e.g., 1cavan of rice equivalent to 50 kilos is also equal to 20 gantas		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-22.5	√	√	√	√	√
23	Solves everyday problems using knowledge and skills on weight/mass, e.g.,:		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-23	√	√	√	√	√
	* harvest of rice, vegetables, fruits, etc.							
	* market price of farm products (e.g., poultry, pigs, beef) based on weight, e.g., price per kilogram							
	* sugar or rice consumption per person per day, per week or month							
	* feed consumed per day by animals on a farm or in a poultry							
	* cost of purchases of meat, vegetables, fish, and other food items, given the unit cost							
	* savings made by buying food items in bulk							
	* amount of ingredients needed for food preparation for a family gathering or community affair							
	* amount of sand, cement, and gravel needed for construction							
24	Demonstrates an understanding of the concepts of temperature and pressure		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-24	√	√	√	√	√
24.1	Interprets temperature in daily life activities, e.g., boiling water, ice water, weather, by using appropriate measuring devices such as a thermometer		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-24.1	√	√	√	√	√

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
24.2	Applies knowledge of temperature in solving everyday problems, e.g.:		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-24.2	√	√	√	√	√
	* monitoring the fever of a family member			√	√	√	√	√
	* planting crops appropriate for climate conditions			√	√	√	√	√
	* food preparation e.g., baking (cakes and bread) or canning of nata de coco				√	√	√	√
24.3	Monitors and controls the temperature of everyday technologies such as:		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-24.3	√	√	√	√	√
	* room air conditioner and refrigerator							
	* oven (baking)							
24.4	Reads, records, and interprets body temperature using a thermometer		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-24.4	√	√	√	√	√
24.5	Converts standard unit of temperature from Fahrenheit to Celsius and vice versa		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-24.5		√	√	√	√
25	Demonstrates skills in measuring water and electricity consumption		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-25	√	√	√	√	√
25.1	Reads, records, and interprets measures of consumption of water and electricity		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-25.1	√	√	√	√	√
	* Relates water consumption with activities/practices that save water			√	√	√	√	√
	*Recognizes the units of measure in reading and estimating water and electricity consumption (cubic meter and kilowatt-hour).			√	√	√	√	√
25.2	Relates electricity consumption with length of time, frequency of use of electric appliances, and wattage of the appliances		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-25.2	√	√	√	√	√

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
25.3	Interprets the items on water and electricity billing statements		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-25.3	√	√	√	√	√
25.4	Computes for the cost of consumption of electricity and water		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-25.4	√	√	√	√	√
	* Computes for the amount of water wasted and its cost if a leaking faucet goes unrepaired			√	√	√	√	√
	* Reads and interprets electric and water and electricity consumption (optional for learners with no access to electric/water meter)			√	√	√	√	√
26	Identifies ways to save/reduce water and electricity consumption		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-26	√	√	√	√	√
27	Demonstrates knowledge and skill in understanding time and the calendar		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-27	√	√	√	√	√
27.1	Tells and writes time by hour, half-hour, and quarter-hour using analog clock	M1ME-IVb-3	LS2CP/NS-NS-PSD-BL-27.1	√				
27.2	Reads and records the time of the day by, e.g.:		LS2CP/NS-NS-PSD-BL/LE/AE-27.2	√	√	√		
	* using a watch or clock			√	√	√		
	* watching the position of the sun			√	√	√		
	* estimating the length of the shadow cast by objects			√	√	√		
27.3	Converts time from smaller to larger units and vice versa., e.g.:		LS2CP/NS-NS-PSD-BL/LE/AE-27.3	√	√	√		
	* seconds to minutes/hours/minutes to hours			√	√	√		
	* days to weeks/months/years; weeks to months			√	√	√		
27.4	Converts time from 12-hour units (a.m./p.m.) to 24-hour (military) units		LS2CP/NS-NS-PSD-LE/AE/LS/AS-27.4		√	√	√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
27.5	Determines the time in another place in the world given the time in the Philippines or vice versa (e.g., when overseas Filipino workers [OFWs] telephone relatives in the Philippines or vice versa)		LS2CP/NS-NS-PSD-LE/AE/LS/AS-27.5		√	√	√	√
27.6	Uses knowledge of time to solve simple problems		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-27.6	√	√	√	√	√
	· estimating the amount of time needed to undertake certain tasks e.g., travel time before attending a program or community activity			√	√	√		
	* counting intervals of time between dosages of medicines			√	√	√		
	* calculating the cost of long-distance phone calls, and cellphone calls (cost per minute)			√	√	√		
27.7	Finds the elapsed time in minutes and seconds	M4ME-IIIf-11	LS2CP/NS-NS-PSD-LE/AE/LS/AS-27.7		√	√	√	√
27.8	Estimates the duration of time in minutes	M4ME-IIIf-12	LS2CP/NS-NS-PSD-LE/AE/LS/AS-27.8		√	√	√	√
27.9	Solves problems involving elapsed time	M4ME-IIIg-13	LS2CP/NS-NS-PSD-LE/AE/LS/AS-27.9		√	√	√	√
28	Reads/interprets time-related charts and tables; e.g.:		LS2CP/NS-NS-PSD-BL/LE/AE-28	√	√	√		
	* provincial bus, ferry, and airline timetables and tickets			√	√	√		
	* tide charts for fishing and boating purposes, time chart for sunset and sunrise, etc.			√	√	√		
29	Relates time to distance, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-29		√	√	√	√
	*estimate the distance for time taken (walking, driving, jogging)				√	√	√	√
	*project the number of trips a jeepney/taxi driver needs to earn enough for the boundary fee plus income for the day				√	√	√	√

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
30	Relates time to volume of work, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-30		√	√	√	√
	*estimate how long it takes to finish a task (e.g., plowing a field) for purposes of hiring laborers.				√	√	√	√
	* estimate fuel cost per hour and per hectare of use of farm machinery				√	√	√	√
	* estimate time needed to irrigate a field of given area				√	√	√	√
31	Relates time to speed, e.g.:		LS2CP/NS-NS-PSD-LE/AE/LS/AS-31		√	√	√	√
	* calculating the time and speed of runners/swimmers in a track and field/swimming competition				√	√	√	√
	* calculating the time and speed of a fishing boat to reach the next island town				√	√	√	√
	* estimating the time of arrival at one's destination when traveling by bus/pump boat				√	√	√	√
32	Solves problems involving average rate and speed	M6ME-IIIg-18	LS2CP/NS-NS-PSD-LE/AE/LS/AS-32		√	√	√	√
33	Uses a calendar to determine days, weeks, months, and years (including number of days in a week, weeks in a month, months in a year, weeks in a year, days in a year, years in a decade/century, etc.)	M1ME-IVa-2	LS2CP/NS-NS-PSD-LE/AE/LS/AS-33		√	√	√	√
33.1	Reads and computes dates in calendars (birthdays, anniversaries, holidays, historical events, Before Christian Era [BCE]/Christian Era [CE].		LS2CP/NS-NS-PSD-BL/LE/AE-33.1	√	√	√		
33.2	Uses knowledge of the calendar in solving problems, e.g.:		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-33.2	√	√	√	√	√
	*uses the calendar for keeping appointments			√	√	√		
	*tells the time of the year when typhoons occur, planting and harvest season, and the wet and dry seasons			√	√	√		

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	* computes for ages and age differences of family members in years and in months			√	√	√		
	*estimates the number of days prior to special events for planning purposes—birthdays, anniversaries, Christmas, fiestas, and other special holidays			√	√	√		
	*determines the fertile period of a wife infamily planning/ childbirth spacing			√	√	√		
	*prepares a schedule to monitor the progress of an assignment, task, or job to be done, e.g., planting/ harvesting schedule, implementation plan of a project, travel itinerary, work schedule, program of activities in a wedding ceremony, opening program, etc.				√	√	√	√
34	Uses estimation skills in working with quantities, measurements, computations, and problems solving in everyday life		LS2CP/NS-NS-PSD-BL/LS/AS-34	√			√	√
34.1	Determines when an estimate is appropriate		LS2CP/NS-NS-PSD-BL-34.1	√				
34.2	Determines an estimate'slevel of accuracy		LS2CP/NS-NS-PSD-BL/LE/AE-34.2	√	√	√		
34.3	Applies estimation when working with quantities, measurement, and computation, e.g.:		LS2CP/NS-NS-PSD-BL/LE/AE/LS/AS-34.3	√	√	√	√	√
	*estimate the cost of items to be purchased at the grocery store before paying atthe cashier			√	√	√		
	*estimate the number of people who will attend a public meeting to plan for the purchase of snacks/drinks			√	√	√		
	*estimate the weight and number of fish in a fishing boat's daily catch			√	√	√		

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	*estimate the number of pieces or volume of items stored in various locally used containers, e.g., candies/soap bars/small fish in a jar/sticks in a bundle			√	√	√		
34.4	Uses estimation to check the reasonableness of the results of computations		LS2CP/NS-NS-PSD-BL/LE/AE-34.4	√	√	√		
35	Derives the formula for the volume of rectangular prisms	M4ME-IVe-63	LS2CP/NS-NS-PSD-LE/AE/LS/AS-35		√	√	√	√
35.1	Creates problems (with reasonable answers) involving volume of rectangular prism	M4ME-IVf-66	LS2CP/NS-NS-PSD-LE/AE/LS/AS-35.1		√	√	√	v

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: Mathematical and Problem Solving Skills

Content Standard: Numeracy Skills
Performance Standard: Acquire mathematical skills for personal and social effectiveness.

Performance Standard E: Demonstrate knowledge and skills in patterns and algebra (linear equations and inequalities in one and two variables, linear functions, systems of linear equations, and inequalities in two variables; exponents and radicals, quadratic equations; inequalities; functions; and polynomials and polynomial equations and functions).

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
1	Defines exponents and other related terms		LS2CP/NS-NS-PSE-AE/LS-1			√	√	
1.1	States and apply the laws of exponents	M7AL-IId-e-1	LS2CP/NS-NS-PSE-LS/AS-1.1				√	√
1.2	Solves problems involving zero and negative integral exponents		LS2CP/NS-NS-PSE-LS/AS-1.2				√	√
1.3	Describes the exponent and the base in a number expressed in exponential notation	M6NS-IIf-146	LS2CP/NS-NS-PSE-AE/LS-1.3			√	√	
1.4	Gives the value of numbers expressed in exponential notation	M6NS-IIf-147	LS2CP/NS-NS-PSE-AE/LS/AS-1.4			√	√	√
1.5	Interprets and explains the Grouping, Exponent, Multiplication, Division, Addition, Subtraction (GEMDAS) rule	M6NS-IIf-148	LS2CP/NS-NS-PSE-AE/LS-1.5			√	√	
1.6	Identify the laws of exponents inreal-life situations		LS2CP/NS-NS-PSE-LS/AS-1.6				√	√
	*the growth of bacteria in a community is inexponential form						√	√
	*the interest of investment in a bank is inexponential form						√	√
	*the computation of loan interest is inexponential form						√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
2	Formulates the rule in finding the **nth** term using different strategies (looking for a pattern, guessing and checking, working backward) e.g., 4,7,13,16,…n (the nth term is 3n+1)	M6AL-IIId-7	LS2CP/NS-NS-PSE-AE/LS/AS-2			√	√	√
3	Defines algebraic expressions and other related terms		LS2CP/NS-NS-PSE-AE/LS/AS-3			√	√	√
3.1	Differentiates expression from equation. M6AL-IIId-15	M6AL-IIId-15 M7AL-IIh-1	LS2CP/NS-NS-PSE-AE/LS/AS-3.1			√	√	√
3.2	Translates real-life verbal expressions into letters or symbols and viceversa	M6AL-IIIe-16	LS2CP/NS-NS-PSE-AE/LS/AS-3.2			√	√	√
3.3	Defines a variable in an algebraic expression and equation	M6AL-IIIe-17	LS2CP/NS-NS-PSE-AE/LS/AS-3.3			√	√	√
4	Represents quantities in real-life situations using algebraic expressions and equations	M6AL-IIIe-18	LS2CP/NS-NS-PSE-AE/LS/AS-4			√	√	√
5	Solves routine and nonroutine problems involving different types of numerical expressions and equations such as 7+9 =+ 6	M6AL-IIIf-19	LS2CP/NS-NS-PSE-LE/AE/LS/AS-5		√	√	٧	√
6	Creates routine and nonroutine problems involving numerical expressions and equations	M6AL-IIIf-20	LS2CP/NS-NS-PSE-AE/LS/AS-6			√	√	√
7	Defines polynomials		LS2CP/NS-NS-PSE-LS/AS-7				√	√
7.1	Interprets the meaning of anywhere n is a positive integer	M7AL-IIc-2	LS2CP/NS-NS-PSE-LS/AS-7.1				√	√
7.2	Differentiates between constants and variables in a given algebraic expression	M7AL-IIc-3	LS2CP/NS-NS-PSE-LS/AS-7.2				√	√
7.3	Evaluates algebraic expressions for given values of the variables	M7AL-IIc-4	LS2CP/NS-NS-PSE-LS/AS-7.3				√	√
7.4	Classifies algebraic expressions which are polynomials according to degree and number of terms	M7AL-IId-1	LS2CP/NS-NS-PSE-LS/AS-7.4				√	√
8	Multiplies polynomials using special products	M7AL-lle-g-1	LS2CP/NS-NS-PSE-LS/AS-8				√	√

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
9	Finds the prime factors of an integer		LS2CP/NS-NS-PSE-LS/AS-9				√	
10	Finds the greatest common factor (GCF) of a set of monomials		LS2CP/NS-NS-PSE-LS-10				√	
11	Factors polynomials using the various methods of factoring (polynomials with common monomial factor, difference of two squares, sum and difference of two cubes, perfect square trinomials, and general trinomials)	M8AL-Ia-b-1	LS2CP/NS-NS-PSE-LS/AS-11				√	√
12	Performs operations on polynomials	M7AL-IId-2 M7AL-IIe-2	LS2CP/NS-NS-PSE-LS/AS-12				√	√
13	Illustrates rational algebraic expression	M8AL-Ic-1	LS2CP/NS-NS-PSE-LS-13				√	
13.1	Simplify rational algebraic expressions	M8AL-Ic-2	LS2CP/NS-NS-PSE-LS-13.1				√	
13.2	Simplifies complex rational algebraic expressions		LS2CP/NS-NS-PSE-LS-13.2				√	
13.3	Multiplies rational algebraic expressions	M8AL-Ic-d-1	LS2CP/NS-NS-PSE-LS-13.3				√	
13.4	Divides the rational algebraic expressions	M8AL-Ic-d-1	LS2CP/NS-NS-PSE-LS-13.4				√	
13.5	Finds the LCD of rational algebraic expressions (both with the same and different denominators)		LS2CP/NS-NS-PSE-LS-13.5				√	
13.6	Converts a given rational expression into an equivalent rational expression		LS2CP/NS-NS-PSE-LS-13.6				√	
13.7	Performs addition of rational algebraic expressions (both with the same and different denominators)	M8AL-Ic-d-1	LS2CP/NS-NS-PSE-LS-13.7				√	
13.8	Performssubtraction of rational algebraic expressions (both with the same and different denominators)	M8AL-Ic-d-1	LS2CP/NS-NS-PSE-LS-13.8				√	
14	Represents real-life situations using rational algebraic expressions		LS2CP/NS-NS-PSE-LS/AS-14				√	√
	*amount of work done per unit		LS2CP/NS-NS-PSE-LS/AS-15				√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
	*distance travel per unit						√	√
	*speed per unit						√	√
15	Performs operations on rational algebraic expressions that involve 2 or more operations		LS2CP/NS-NS-PSE-LS/AS-15				√	√
16	Illustrates the rectangular coordinate system and its uses	M8AL-IE-1	LS2CP/NS-NS-PSE-LS-16				√	
17	Defines linear equations		LS2CP/NS-NS-PSE-LS-17				√	
17.1	Simplifies linear equations		LS2CP/NS-NS-PSE-LS/AS-17.1				√	√
18	Writes the linear equation ax + by = c in the form y = mx + b and vice-versa; x+y=3 transform into y=-x+3	M8AL-If-1	LS2CP/NS-NS-PSE-LS/AS-18				v	v
18.1	Finds the slope of linear equations	M8AL-IE-5	LS2CP/NS-NS-PSE-LS/AS-18.1				√	√
18.2	Finds the intercepts of linear equations both x and y-intercepts		LS2CP/NS-NS-PSE-LS/AS-18.2				√	√
19	Graphs different types of linear equations	M8AL-If-2	LS2CP/NS-NS-PSE-LS/AS-19				√	√
19.1	Describes the slope and intercepts of linear equation based on the graph	M8AL-If-3	LS2CP/NS-NS-PSE-LS/AS-19.1				√	√
20	Solves systems of linear equations using different methods: elimination & substitution	M8AL-Ii-j-1	LS2CP/NS-NS-PSE-LS/AS-20				√	√
20.1	Determines whether the systems of linear equations in two variables are consistent or inconsistent, dependent or independent		LS2CP/NS-NS-PSE-LS/AS-20.1				√	√
20.2	Describes systems of linear equations as to whether its graph is parallel, coinciding, or intersecting using formula	M8AL-Ih-3	LS2CP/NS-NS-PSE-LS/AS-20.2				√	√
21	Solves word problems involving linear equations	M7AL-IIj-2 M8AL-Ig-2	LS2CP/NS-NS-PSE-LS/AS-21				√	√
22	Defines quadratic equations and other related terms and its properties		LS2CP/NS-NS-PSE-AS-22					v

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
22.1	Illustrates quadratic equations	M9AL-Ia-1	LS2CP/NS-NS-PSE-AS-22.1					۷
22.2	Writes a quadratic equations in standard form		LS2CP/NS-NS-PSE-AS-22.2					۷
22.3	Solves quadratic equations using different methods: quadratic formula, factorization, completing the square	M9AL-Ia-b-1	LS2CP/NS-NS-PSE-AS-22.3					√
23	Illustrates quadratic functions		LS2CP/NS-NS-PSE-AS-23					√
23.1	Differentiate quadratic function from quadratic equation		LS2CP/NS-NS-PSE-AS-23.1					√
23.1	*human relationships: mother and daughter, husband and wife, teacher and students							√
23.1	*coordinates of points							√
23.1	*graphs of different equations							√
23.2	Sketches the graph of a quadratic function using different methods	M9AL-Ig-h-i-1	LS2CP/NS-NS-PSE-AS-23.2					√
23.3	Describes the graph of quadratic function in terms of intercepts, axis of symmetry, and vertex	M9AL-Ig-h-i-1	LS2CP/NS-NS-PSE-AS-23.3					√
24	Finds the discriminant of quadratic function then describes its roots and graph	M9AL-Ig-h-i-1	LS2CP/NS-NS-PSE-AS-24					√
25	Finds the maximum or minimum value of quadratic function:		LS2CP/NS-NS-PSE-AS-25					√
25	* maximum income							√
25	*minimum sales require to breakeven							√
26	Illustrates polynomial functions	M10AL-IIa-1	LS2CP/NS-NS-PSE-AS-26					√
26.1	Identifies the key concepts of polynomial functions		LS2CP/NS-NS-PSE-AS-26.1					√
26.2	Evaluates functions		LS2CP/NS-NS-PSE-AS-26.2					√

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
26.3	Performs operations on functions		LS2CP/NS-NS-PSE-AS-26.3					√
26.4	Graphs polynomial functions	M10AL-IIa-b-1	LS2CP/NS-NS-PSE-AS-26.4					√
26.5	Applies remainder theorem and factor theorem	M10AL-Ig-2	LS2CP/NS-NS-PSE-AS-26.5					√
27	Defines inequality and other related terms		LS2CP/NS-NS-PSE-LS/AS-27				√	√
27.1	Sketches inequalities(linear and quadratic inequalities)		LS2CP/NS-NS-PSE-LS/AS-27.1				√	√
27.2	Solves the inequalities by graphing	M10AL-Iia-b-1	LS2CP/NS-NS-PSE-LS/AS-27.2				√	√
27.3	Solves systems of inequalities (both 1st- and 2nd-degree equations)	M8AL-IIb-1	LS2CP/NS-NS-PSE-LS/AS-27.3				√	√
28	Solves word problems involving inequalities	M8AL-IIa-4 M9AL-IIa-2	LS2CP/NS-NS-PSE-LS/AS-28				√	√
	*determine the value of production that will give profit/loss						√	√
	*determine the number of supply and demand that will give profit or loss						√	√
29	Defines variations and types of variations		LS2CP/NS-NS-PSE-AS-29					√
29.1	Illustrates situations that involve the following variations: (a) direct, (b) inverse, (c) joint, (d) combined	M9AL-IIa-1	LS2CP/NS-NS-PSE-AS-29.1					√
	* number of workers and time to finish the job (inverse variation)							√
	* speed of the car and distance traveled (direct variation)							√
30	Applications of different variations in real-life situation		LS2CP/NS-NS-PSE-AS-30					√
31	Illustrates an arithmetic sequence	M10AL-Ib-1	LS2CP/NS-NS-PSE-AS-31					√

| No. | Learning Competency | Code | | BL K-1 | EL | | SL | |
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
31.1	Identifiessequence (whether arithmetic or not)	M9AL-IIa-1	LS2CP/NS-NS-PSE-AS-31.1					√
31.2	Determines the general equation of arithmetic sequence		LS2CP/NS-NS-PSE-AS-31.2					√
31.3	Finds the unknown term/s of arithmetic sequence	M10AL-Ib-c-1	LS2CP/NS-NS-PSE-AS-31.3					√
31.4	Finds the arithmetic series and other related unknown values		LS2CP/NS-NS-PSE-AS-31.4					√
31.5	Finds the arithmetic mean/s	M10AL-Ib-c-1	LS2CP/NS-NS-PSE-AS-31.5					√
32	Illustrates a geometric sequence	M10AL-Id-1	LS2CP/NS-NS-PSE-AS-32					√
32.1	Identifies sequence (whether geometric or not)	M10AL-Id-1 M10AL-Id-2	LS2CP/NS-NS-PSE-AS-32.1					√
32.2	Determines the general equation of geometric sequence		LS2CP/NS-NS-PSE-AS-32.2					√
32.3	Finds the unknown terms of geomteric sequence	M10AL-Ie-1	LS2CP/NS-NS-PSE-AS-32.3					√
32.4	Finds the geometric series and other unknown values		LS2CP/NS-NS-PSE-AS-32.4					√
32.5	Finds the geometric means	M10AL-Ie-1	LS2CP/NS-NS-PSE-AS-32.5					√
33	Solves problems thatinvolve arithmetic and geometric sequences/series	M10AL-If-2	LS2CP/NS-NS-PSE-AS-33					√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

Learning Strand 3: Mathematical and Problem Solving Skills

Content Standard: Numeracy Skills
Performance Standard: Acquire mathematical skills for personal and social effectiveness.

Performance Standard F: Demonstrate understanding and skill in the effective use of tables, graphs and statistics in presenting, analyzing and interpreting data, and dealing with uncertainty; and making predictions about outcomes for everyday problem solving

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
1	Collects and records data, e.g.:		LS2CP/NS-NS-PSF-BL/LE/AE/LS/AS-1	√	√	√	√	√
	* total number of registered voters who actually voted in the different barangays of a particular municipality			√	√	√	√	√
	* total number of votes cast for individual candidates by position in a barangay election (barangay captain and councilors)			√	√	√	√	√
	* total number of votes cast for individual candidates by position in a local election (mayor and councilors)			√	√	√	√	√
1.1	Records data and systematically arrangesthesein a table		LS2CP/NS-NS-PSF-BL/LE/AE/LS/AS-1.1	√	√	√	√	√
1.2	Tallies the frequency of occurrence, e.g., votes counted in a barangay election for candidates		LS2CP/NS-NS-PSF-BL/LE/AE/LS/AS-1.2	√	√	√	√	√
1.3	Organizes information collected in a frequency distribution table	M7SP-IVc-1	LS2CP/NS-NS-PSF-BL/LE/AE/LS/AS-1.3	√	√	√	√	√
2	Describes the different kinds of graphs used to organize and present data in real life situations, e.g.:.		LS2CP/NS-NS-PSF-BL/LE/AE/LS/AS-2	√	√	√	√	√
	* pictograph, e.g., annual harvest production rates, daily egg production, harvest expenses, farmers planting different crops			√	√			

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
	* bar graphs, e.g., survey results (political poll results, market research results, community needs assessment results), comparison of yields of rice in different fields, daily sales records, etc.				√	√	√	√
	* line graphs, e.g., monthly consumption of electricity indicated on an electric bill, peso-dollar fluctuations, dollar exchange rate, population growth rate				√	√	√	√
	* circle/pie graphs, e.g., distribution of labor force in different economic sectors, percentage of monthly family budget allocated/spent on certain items (food, clothing, housing, transport, expenses on education, etc.)					√	√	√
2.1	Identifies the parts of a pictograph, bar graph, and line graph, i.e., title, legend, labels, and vertical and horizontal axes		LS2CP/NS-NS-PSF-LE/AE-2.1		√	√		
2.2	Interprets the legend in a graph		LS2CP/NS-NS-PSF-LE/AE/LS-2.2		√	√	√	
3	Translates data into graphs or charts		LS2CP/NS-NS-PSF-LE/AE/LS/AS-3		√	√	√	√
3.1	Constructs pictographs, bar graphs, line graphs, and pie/circle graphs to organize, present, and analyze data from everyday life situations showing, e.g.:	M7SP-IVd-e-1	LS2CP/NS-NS-PSF-LE/AE/LS/AS-3.1		√	√	√	√
	* daily egg production in poultry				√	√	√	√
	* daily/weekly sales of different sari-sari store items				√	√	√	√
	* annual harvests and yields of certain fields				√	∨	√	√
	* daily or weekly fuel consumption (kerosene, gasoline, wood, or charcoal)				√	√	√	√
	* body temperature of sick family members				√	√	√	∨
	* growth rate of one's children				√	√	∨	√
3.2	Reads/interprets data presented in a graph		LS2CP/NS-NS-PSF-LE/AE/LS/AS-3.2		√	√	√	√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
4	Analyzes and draws conclusions from statistical data presented in graphs and tables	M7SP-IVj-1	LS2CP/NS-NS-PSF-LE/AE/LS/AS-4		√	√	√	√
4.1	Makes comparisons of data presented in a graph		LS2CP/NS-NS-PSF-LE/AE/LS/AS-4.1		√	√	√	√
4.2	Draws inferences and conclusions based on analysis of data presented in graphs and tables		LS2CP/NS-NS-PSF-LE/AE/LS/AS-4.2		√	√	√	√
5	Solves routine and nonroutine problems using data presented in a pictograph without and with scales	M1SP- Ivh-4.1; M2SP-Ivi-4.2	LS2CP/NS-NS-PSF-LE/AE/LS/AS-5		√	√	√	√
6	Defines mean, median, mode, and other related terms		LS2CP/NS-NS-PSF-AE/LS/AS-6			√	√	√
6.1	Illustrates the different properties of measures of central tendency		LS2CP/NS-NS-PSF-AE/LS/AS-6.1			√	√	√
6.2	Illustrates the measures of central tendency (mean, median, and mode) of a statistical data	M7SP-IVf-1	LS2CP/NS-NS-PSF-AE/LS/AS-6.2			√	√	√
6.3	Calculates the measures of central tendency of ungrouped and grouped data	M7SP-IVf-g-1	LS2CP/NS-NS-PSF-AE/LS/AS-6.3			√	√	√
6.4	Uses mean, median, and mode and measures of variation to analyze and interpret data to solve problems in daily life	M7SP-IVf-g-1	LS2CP/NS-NS-PSF-AE/LS/AS-6.4			√	√	√
7	Illustrates the measures of variability (range, average deviation, variance, standard deviation) of statistical data	M7SP-IVh-1	LS2CP/NS-NS-PSF-AE/LS/AS-7			√	√	√
7.1	Calculates the measures of variability of grouped and ungrouped data	M7SP-IVh-i-1	LS2CP/NS-NS-PSF-AE/LS/AS-7.1			√	√	√
8	Draws conclusions from graphic and tabular data using measures of central tendency and variability	M7SP-IVj-2	LS2CP/NS-NS-PSF-AE/LS/AS-8			√	v	√
9	Poses problems that can be solved using Statistics (measures of central tendency and variability)	M7SP-IVa-2	LS2CP/NS-NS-PSF-AE/LS/AS-9			√	v	√
10	Illustrates the following measures of position: quartiles, deciles, and percentile	M10SP-IVa-1	LS2CP/NS-NS-PSF-AE/LS/AS-10			√	v	v
10.1	Calculates a specified measure of position (e.g., 90thpercentile) of a set of data	M10SP-IVb-1	LS2CP/NS-NS-PSF-AE/LS/AS-10.1			√	√	v

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

No.	Learning Competency	Code K to 12	Code ALS	BL K-1	EL LE (Gr.2–3)	EL AE (Gr.4–6)	SL JUNIOR HIGH SCHOOL	SL SENIOR HIGH SCHOOL
10.2	Solves problems involving measures of position	M10SP-IVd-e-1	LS2CP/NS-NS-PSF-AE/LS/AS-10.2			√	√	√
10.3	Interprets measures of position	M10SP-IVc-1	LS2CP/NS-NS-PSF-AE/LS/AS-10.3			√	√	√
11	Uses appropriate measures of position and other statistical methods in analyzing and interpreting research data	M10SP-IVh-j-1	LS2CP/NS-NS-PSF-AE/LS/AS-11			√	√	√
12	Distinguishes between a sample and a population		LS2CP/NS-NS-PSF-AE/LS/AS-12			√	√	V
12.1	Determines the use of sampling		LS2CP/NS-NS-PSF-AE/LS/AS-12.1			√	√	√
13	Describes and differentiates the types of sampling techniques		LS2CP/NS-NS-PSF-LS/AS-13				√	√
14	Identifies the appropriate sample size using Slovins Formula and other techniques		LS2CP/NS-NS-PSF-LS/AS-14				√	√
15	Differentiates parameters and statistics, and theirrelationship		LS2CP/NS-NS-PSF-LS/AS-15				√	√
16	Formulates simple statistical instruments	M7SP-IVa-3	LS2CP/NS-NS-PSF-LS/AS-16				√	√
17	Conducts a simple survey		LS2CP/NS-NS-PSF-LS/AS-17				√	√
18	Describes the meaning of probability such as "50% chance of rain" and "one in a million chance of winning"	M6SP-IVg-19	LS2CP/NS-NS-PSF-AE/LS/AS-18			√	√	√
	*the meaning of daily weather news					√	√	√
	*the chance of winning or losing in any local game					√	√	√
19	States and applies the fundamental principle of counting		LS2CP/NS-NS-PSF-AE/LS/AS-19			√	√	√
20	Differentiates permutation from combination		LS2CP/NS-NS-PSF-AE/LS/AS-20			√	√	√
21	Applies the concepts of permutation and combination to real-life situations		LS2CP/NS-NS-PSF-AE/LS/AS-21			√	√	√

No.	Learning Competency	Code		BL K-1	EL		SL	
		K to 12	ALS		LE (Gr.2–3)	AE (Gr.4–6)	JUNIOR HIGH SCHOOL	SENIOR HIGH SCHOOL
22	Describes experimental probability	M5SP-IVi-14	LS2CP/NS-NS-PSF-AE/LS/AS-22			√	√	√
22.1	Performs an experimental probability and records result by listing	M5SP-IVi-15	LS2CP/NS-NS-PSF-LS/AS-22.1				√	√
22.2	Records favourable outcomes in a simple experiment (e.g., tossing a coin, spinning a wheel, etc.)	M4SP-IVi-9	LS2CP/NS-NS-PSF-AE/LS/AS-22.2			√	√	√
22.3	Expresses the outcome in a simple experiment in words, symbols, tables, or graphs	M4SP-IVi-10	LS2CP/NS-NS-PSF-AE/LS/AS-22.3			√	√	√
23	Explains the outcomes in an experiment	M4SP-IVi-11	LS2CP/NS-NS-PSF-AE/LS/AS-23			√	√	√
24	Discusses and illustrates the probability of simple and compound events		LS2CP/NS-NS-PSF-AE/LS/AS-24			√	√	√
25	Analyzes data obtained from chance using experiments involving letter cards (A–Z) and number cards (0–20).	M5SP-IVi-16	LS2CP/NS-NS-PSF-AE/LS/AS-25			√	√	√
26	Solves routine and nonroutine problems involving experimental and theoretical probability	M5SP-IVj-17	LS2CP/NS-NS-PSF-AE/LS/AS-26			√	√	√
26.1	Creates routine and nonroutine problems involving experimental and theoretical probability	M5SP-IVj-18	LS2CP/NS-NS-PSF-AE/LS/AS-26.1			√	√	√
27	States and applies the laws of probability in everyday life		LS2CP/NS-NS-PSF-AE/LS/AS-27			√	√	√
27.1	Calculates probabilities in real-life situations		LS2CP/NS-NS-PSF-LS/AS-27.1				√	√
28	Solves routine and no-routine problems involving a simple experiment	M4SP-IVj-12	LS2CP/NS-NS-PSF-AE/LS/AS-28			√	√	√
29	Makes simple predictions of events based on the results of experiments		LS2CP/NS-NS-PSF-AE/LS/AS-29			√	√	√
30	Formulates a mini-research	M10SP-IVf-g-1	LS2CP/NS-NS-PSF-AS-30					√

K TO 12 BASIC EDUCATION CURRICULUM FOR THE ALTERNATIVE LEARNING SYSTEM (ALS-K TO 12)

CODE LEGEND

Learning Strand Code

Learning Strand 1	Communication Skills	LS1CS
Learning Strand 2	Scientific Literacy and Critical Thinking Skills	LS2SC
Learning Strand 3	Mathematical and Problem Solving Skills	LS3MP
Learning Strand 4	Life and Career skills	LS4LC
Learning Strand 5	Understanding the Self and Society	LS5US
Learning Strand 6	Digital Literacy	LS6DL

ALS Level Code

Basic Literacy	BL	Filipino	
Elementary Level (Lower)	LE	Antas Elementarya (Mababa)	AEMB
Elementary Level (Advanced)	AE	Antas Elementarya (Mataas)	AEMT
Secondary Level (Lower)	LS	Junior High School	ASMB
Secondary Level (Advanced)	AS	Senior High School	ASMT

LEARNING STRAND 3: MATHEMATICAL AND PROBLEM SOLVING SKILLS
Sample: **LS3MP-NS-PSF-LE/AE/LS/AS-2**

	LEGEND	SAMPLE	
First Entry	Learning Strand and Skills	Learning Strand 3 Mathematical and Problem Solving Skills	LS3MP
Uppercase Letter/s	Content Standard	Numeracy Skills	NS
	Performance Standard	Performance Standard	PSF
	Level	Basic Literacy/ Elementary Level (Lower)/ Elementary Level (Advanced)/ Junior High School/ Senior High School	LE/AE/LS/AS
Arabic Number	Learning Competency	Learning Competency	2

Content Standard	Code
Numeracy Skills	NS