| Study Unit ( Content ) | Standard | Indicators |
| :---: | :---: | :---: |
| 1. Surface area and volume <br> 1.1 Surfaces areas of prisms, cylinders, pyramids, cones and spheres. (Local) 1.2 Volumes of prisms, cylinders, pyramids, cones and spheres | M 6.1 <br> M 2.1 | Capacity for problem-solving, reasoning, and communication; communication and presentation of mathematical concepts; linking various bodies of mathematical knowledge and linking mathematics with other disciplines; and attaining ability for creative thinking <br> m. 3/1 Apply diverse methods for problem-solving. <br> $\mathrm{m} .3 / 4$ Accurately and succinctly use mathematical language and symbols for communication, communication of concepts and presentation. <br> Understanding the basics of measurement; ability to measure and estimate the size of objects to be measured <br> m.3/1 Find the surface area of prisms and cylinders. pyramids, cones and spheres. <br> m.3/2 Find the volume of prisms, cylinders, pyramids, cones and spheres |
| 2. Inequalities. <br> 2.1 Linear inequality with one variable. <br> 2.2 Solving linear inequality with one variable. <br> 2.3 Solving problems linear inequality with one variable. | M 6.1 <br> M4.2 | Capacity for problem-solving, reasoning, and communication; communication and presentation of mathematical concepts; linking various bodies of mathematical knowledge and linking mathematics with other disciplines; and attaining ability for creative thinking <br> m. 3/1 Apply diverse methods for problem-solving. <br> $\mathrm{m} .3 / 4$ Accurately and succinctly use mathematical language and symbols for communication, communication of concepts and presentation. <br> Ability to apply algebraic expressions, equations, inequalities, graphs and other mathematical models to represent various situations, as well as interpretation and application for problem-solving <br> m.3/1 Apply knowledge of linear inequalities with one variable for |


|  |  | problem-solving, as well as be aware of the validity of the answer. |
| :---: | :---: | :---: |
| 3. linear equations with two variables <br> 3.1 Graphing Linear Equations <br> 3.2 Linear graphs of 2 unknown <br> 3.3 Slope-Intercept Form | M 4.2 | Ability to apply algebraic expressions, equations, inequalities, graphs and other mathematical models to represent various situations, as well as interpretation and application for problem-solving. <br> m.3/2 Write a graph showing link of two sets of quantities with linear relationship. <br> m.3/3 Draw graphs of linear equations with two variables. |
| 4. Systems of Linear Equations. <br> 4.1 Systems of linear equations with 2 variables. <br> 4.2 Solving systems of linear equations with 2 variables and graph. <br> 4.3 Using systems of linear equations with 2 variables to solve problems. | M 4.2 | Ability to apply algebraic expressions, equations inequalities, graphs and other mathematical models to represent various situations, as well as interpretation and application for problem-solving. <br> m.3/3 Draw graphs of linear equations with two variables. <br> m. $3 / 5$ Solve systems of linear equations with two variables which can be applied for problem-solving, as well as be aware of the validity of the answer. |

## Measurement and Evaluation

Total score 100 points (Assessment 60 : Midterm / Final test 40 )

| Measurement and Evaluation | Evaluation <br> Methods | Assessment tool | Points | Expected outcomes |
| :---: | :---: | :---: | :---: | :---: |
| 1. Pre - Midterm | 1. Test <br> 2. Project <br> 3.Presentation | 1. Real Objects <br> 2. Project Making <br> Criteria <br> 3. Presentation <br> Making Criteria | $\begin{gathered} 15 \\ 5 \\ 5 \end{gathered}$ | M $6.1 \mathrm{~m} .3 / 1$ <br> M $6.1 \mathrm{~m} .3 / 4$ <br> M2.1 m.3/1-2 <br> M $4.2 \mathrm{~m} .3 / 1$ |
| 2, Midterm Test | Tests | Examination | 20 | M2.1 m.3/1-2 <br> M4.2 m.3/1 |


| 3. Post - Midterm | 1. Test <br> 2. Project <br> 3.Presentation | 1. Worksheets <br> 2. Project Making <br> Criteria <br> 3. Presentation <br> Making Criteria | $\begin{gathered} 15 \\ 5 \\ 5 \end{gathered}$ | $\begin{aligned} & \mathrm{M} 4.2 \mathrm{~m} .3 / 2, \\ & \mathrm{~m} .3 / 3, \mathrm{~m} .3 / 5 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 4. Final Test | Tests | Examination | 20 | M4.2 m.3/2, m. $3 / 3, \mathrm{~m} .3 / 5$ |
| 5. Desirable Characteristics | 1. Observe | Observation | 10 | 1.Love of nation, religion and king <br> 2. Honesty and integrity <br> 3. Self-discipline <br> 4. Avidity of learning <br> 5. Being Economy philosophy sufficiency <br> 6. Responsibility and commitment to work <br> 7. Cherishing thai-ness <br> 8. Public-mindedness <br> 9. Awareness of drugs and vice <br> 10. Assertive leadership |
| 6. Competencies | - Test <br> - Recitation <br> - Presentation | Examination <br> Worksheets <br> - Rubrics | - | 1. Communication Capacity. <br> 2. Thinking Capacity <br> 3. Problem Solving Capacity <br> 4. Capacity for technology <br> Application <br> 5. Capacity for Applying Life Skills |
| 7. Analytical reading and writing | - Solving Word <br> Problems | - Worksheets | - | 1. Understand the concept of the word problem read. <br> 2. Utilize mathematics in a practical way by finding solution to real world problems. |

