

		m.2/2 Appropriately estimate time, distance, area, volume and explain the method use for estimation
3. Pie – charts 3.1 Reading of pie-charts 3.2 Writing of pie-charts (Local)	M 5.1	Understanding and ability to apply statistical methodology for data analysis m.2/1 Reading and present data by using pie-charts.
4. Transformation geometry 4.1 Transformation 4.2 Reflections 4.3 Rotations	M 3.2	Ability for visualization, spatial reasoning and application of geometric models for problem-solving. m.2/3 Understanding and apply geometric transformation through transformation, reflection and rotation. m.2/4 Identify images from transformation, reflection and rotation of models and explain the method of obtaining the images when such models and images.
5. Congruence 5.1 Congruence of geometric figures 5.2 Congruence of triangles 5.3 Two triangles are congruence with reason S-A-S 5.4 Two triangles are congruence with reason A-S-A 5.5 Two triangles are congruence with reason S-S-S	M 3.2	Ability for visualization, spatial reasoning and application of geometric models for problem-solving. m.2/1 Use properties of congruence of triangles for reasoning.

Measurement and Evaluation

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

Measurement and Evaluation	Evaluation Methods	Assessment tool	Points	Expected outcomes
1. Pre - Midterm	1. Test 2. Project 3.Presentation	1. Worksheets 2. Project Making Criteria 3. Presentation Making Criteria	15 5 5	M 6.1 m.2/1 m2/4 M1.1 m2/4 M2.1 m.2/1 m.2/2
2. Midterm Test	Tests	Examination	20	M 6.1 m.2/1 m2/4

				M 1.1 m2/4 M 2.1 m.2/1 m.2/2
3. Post - Midterm	1. Test 2. Project 3.Presentation	1. Worksheets 2. Project Making Criteria 3. Presentation Making Criteria	15 5 5	M5.1 m2/1 M3.2 m2/3 ,m.2/4
4. Final Test	Tests	Examination	20	M5.1 m2/1 M3.2 m.2/1 ,m2/3 ,m.2/4
5. Desirable Characteristics	1. Observe	1. Observation	10	1.Love of nation, religion and king 2. Honesty and integrity 3. Self-discipline 4. Avidity of learning 5. Being Economy philosophy sufficiency 6. Responsibility and commitment to work 7. Cherishing thai-ness 8. Public-mindedness 9. Awareness of drugs and vice 10. Assertive leadership
6. Competencies	- Solving Word Problems	- Worksheets	-	1. Understand the concept of the word problem read. 2. Utilize mathematics in a practical way by finding
7. Analytical reading and writing	- Solving Word Problems	- Worksheets	-	1. Understand the concept of the word problem read. 2. Utilize mathematics in a practical way by finding solution to real world problems.