



basic education

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA

## MATHEMATICS LESSON PLAN

### GRADE 9

TERM 2: April – June

PROVINCE:	
DISTRICT:	
SCHOOL:	
TEACHER'S NAME:	
DATE:	
DURATION:	1 Hour

**1. TOPIC: GEOMETRY OF STRAIGHT LINE: ANGLE RELATIONSHIP (Lesson 4)**

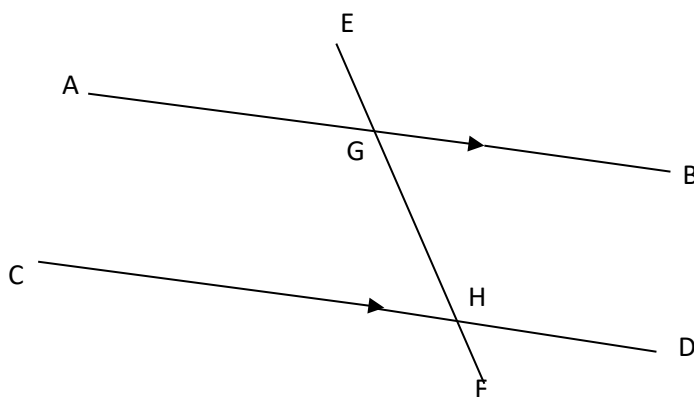
**2. CONCEPTS & SKILLS TO BE ACHIEVED:**

By the end of the lesson, learners should know and be able to write clear descriptions of the relationship between angles formed by parallel lines cut by a transversal.

<b>3. RESOURCES:</b>	DBE workbook, Sasol-Inzalo book, textbooks
<b>4. PRIOR KNOWLEDGE:</b>	Angles formed by - Intersecting lines - Parallel lines cut by a transversal
<b>5. REVIEW AND CORRECTION OF HOMEWORK (suggested time: 10 minutes)</b>	Homework provides an opportunity for teachers to track learners' progress in the mastery of mathematics concepts and to identify the problematic areas which require immediate attention. Therefore, it is recommended that you place more focus on addressing errors from learner responses that may later become misconceptions.

**6. INTRODUCTION(Suggested time: 10 Minutes)**

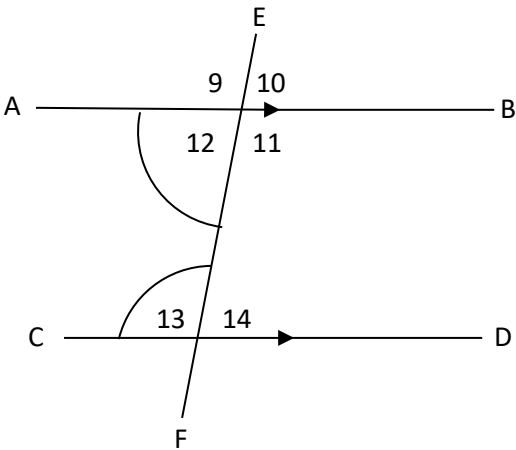
Draw the following figure and ask learners to respond to the questions below.



- What do you know about  $\widehat{CHG} + \widehat{DHG}$ ? Explain
- What do you know about  $\widehat{BGH} + \widehat{AGH}$ ? Explain
- What do you know about  $\widehat{BGH} + \widehat{CHG}$ ? Explain
- What conclusion can you draw about  $\widehat{AGH}$  and  $\widehat{CHG}$ ?

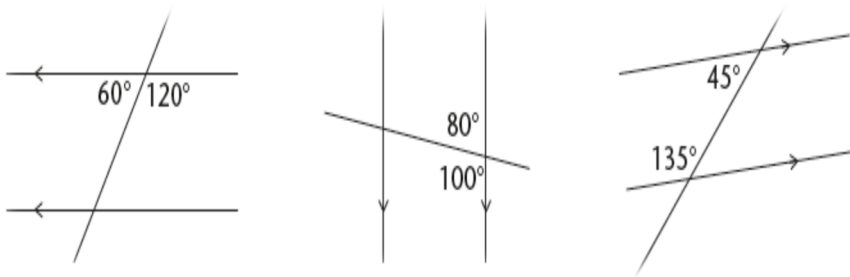


**7. LESSON PRESENTATION/DEVELOPMENT**(Suggested time: 20 minutes)

Teaching activities	Learning activities (Learners are expected to:)
<p><b>Activity 1</b></p> <p>When a transversal intersects two lines, we can compare the set of angles on the two lines by looking at their positions.</p> <p>When a transversal intersects two lines, we can compare the set of angles on the two lines by looking at their positions.</p> <p>a) Measure the sizes o of <math>\widehat{12}</math> and <math>\widehat{13}</math>                      b) Calculate the sum of <math>\widehat{12}</math> and <math>\widehat{13}</math>                      c) Name pairs of co-interior angles.</p>  <p><b>Solutions</b></p> <p>a) Measures of <math>\widehat{12}</math> and <math>\widehat{13}</math>                      b) <math>\widehat{12} + \widehat{13} = 180^{\circ}</math>      Sum of co-interior angles</p> <p><b>NB:</b> If lines are parallel, then <b>co-interior angles</b> add up to <math>180^{\circ}</math></p> <p>c) Ask learners to give other pairs of co interior angles and provide reasons.</p>	<ul style="list-style-type: none"> <li>respond to the questions</li> </ul>

### Activity 2

Find the co interior angles in the following diagrams

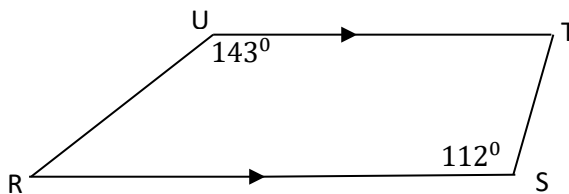


- complete activity 2

### Activity 3

RSTU is a trapezium.

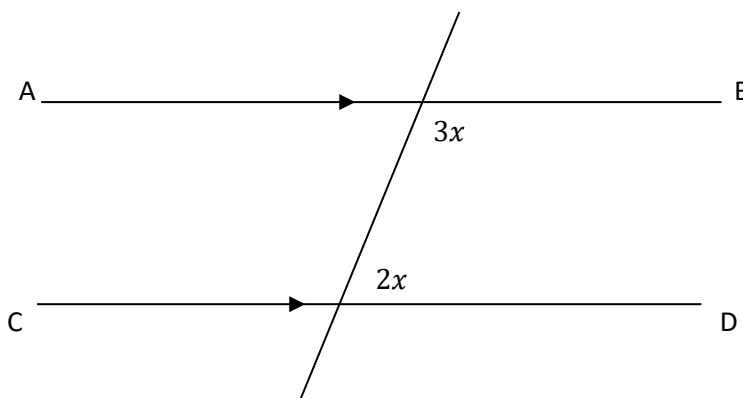
Calculate the sizes of  $\hat{T}$  and  $\hat{R}$ . Give reasons for your answers



- complete activity 3

### 8. CLASSWORK (Suggested time: 15 minutes)

Calculate the value of  $x$ . Give reason for your answer.



## 9. CONSOLIDATION/CONCLUSION & HOMEWORK(Suggested time: 5 minutes)

### a) Emphasise that:

- transversal is line that intersects other lines.
- parallel lines are lines that have the same distance apart, the same direction and will never meet each other.
- alternate interior angles are angles on different sides of a transversal and between two other lines.
- alternate exterior angles are angles that lie outside of the two lines.
- co-interior angle are angles that lie on the same side of the transversal and between the two lines.

- b) The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore Homework should be purposeful and the principle of 'Less is more' is recommended, i.e. give learners few high quality activities that address variety of skills than many activities that do not enhance learners' conceptual understanding. Carefully select appropriate activities from the Sasol-Inzalo Books, workbooks and/or textbooks for learners' homework. The selected activities should address different cognitive levels.

### Homework

- Find the sizes of  $x$ ,  $y$  and  $z$ . Give reasons for all your answers

