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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 2**)

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.

3.	RESOURCES:	DBE Workbook 1, Sasol-Inzalo Book 1, textbooks, protractors
4.	PRIOR KNOWLEDGE:	• angles

5. REVIEW AND CORRECTION OF HOMEWORK (suggested time: 10 minutes)

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.
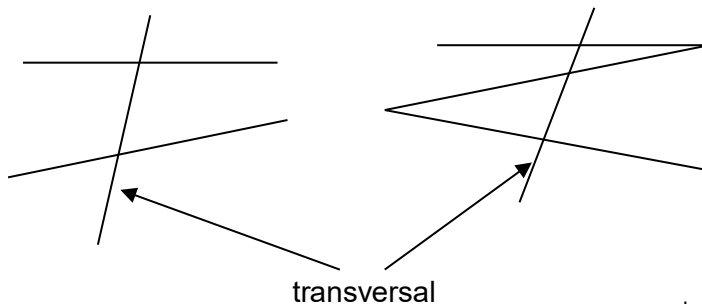
6. INTRODUCTION (Suggested time: 10 Minutes)
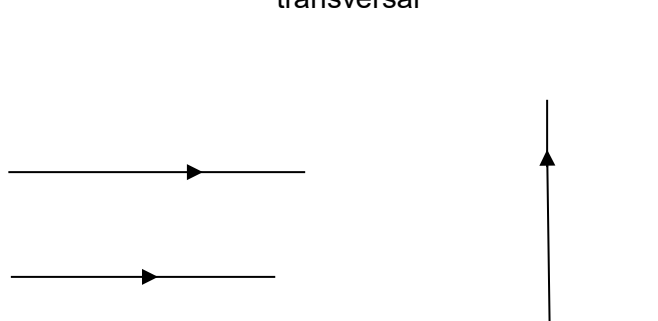
Revise the work done in grade 8

Revise the definition of the following terms:
- Transversal line, and
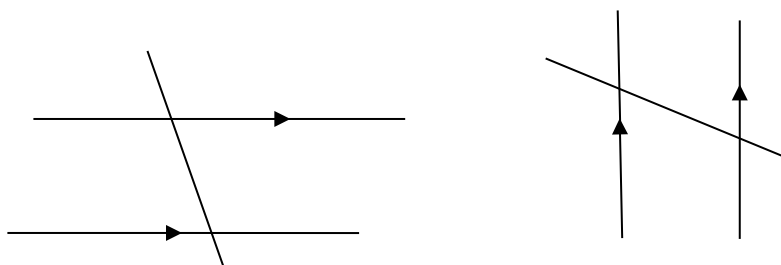- Parallel lines, with examples.

a)   A transversal is a line that crosses at least two other lines.

transversal

b)

Parallel lines are lines that are the same distance apart, have the same direction and will never meet each other.

Note: The arrow heads are used to indicate that the lines are parallel.

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GEOMETRY OF STRAIGHT LINE: Angle relationship **(Lesson 2)**
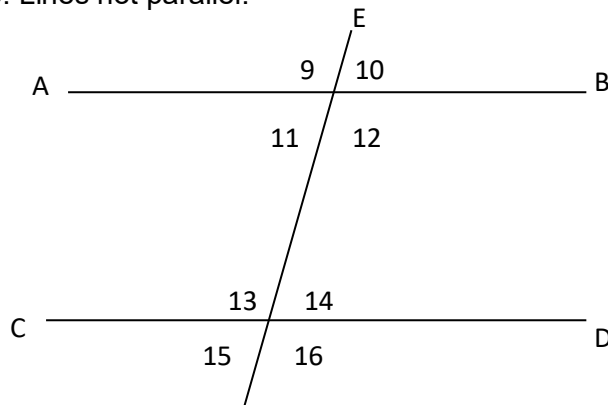**(Draft)**

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| Teaching activities	Learning activities (Learners are expected to:)
Activity 1 When a transversal intersects two lines, we can compare the pairs of angles formed by looking at their positions. Consider the figure below: **Note**: Lines not parallel. Use the above figure to complete the table below. What do we call the pairs in the table? **Note**: The purpose of activity 1 is to match the position of the angles and special name of the angles. Explanation should be given that, the angles that lie on the same side of the transversal and are in matching positions are called **corresponding angles.**	• work in pairs and complete the table

Position	Pair
Right of transversal and above lines	$\hat{10}$ and $\hat{14}$
Left of transversal and below lines	
Left of transversal and above lines	
Right of transversal and below lines	

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Activity 2: Divide learners into small groups.

In the figure below left, EF is a transversal to AB and CD. In the figure below right, PQ is a transversal to parallel lines JK and LM.
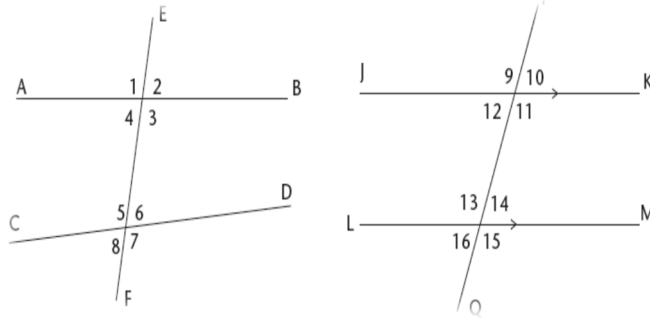
Use a protractor to measure the sizes of all the angles in each figure. Write measurements on the figure given work sheet and learners are allowed to extend the lines in order to measure correctly.

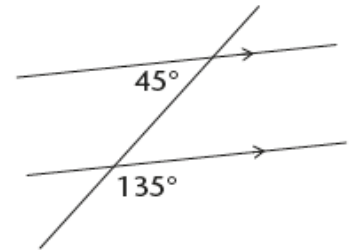| Angles	When two lines are not parallel	When two lines are parallel
Corr. angles	$\hat{1} =$ _____ ; $\hat{5} =$ _____ $\hat{4} =$ _____ ; $\hat{8} =$ _____ $\hat{2} =$ _____ ; $\hat{6} =$ _____ $\hat{3} =$ _____ ; $\hat{7} =$ _____	$\widehat{9} =$ _____ ; $\widehat{13} =$ _____ $\widehat{12} =$ _____ ; $\widehat{16} =$ _____ $\widehat{10} =$ _____ ; $\widehat{14} =$ _____ $\widehat{11} =$ _____ ; $\widehat{15} =$ _____

Each group presents their findings.

Look at your completed table above. What do you notice about the corresponding angles formed when a transversal intersects parallel lines?

- Each group measures all angles pairs and complete the table.

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1. Fill in the corresponding angles to those given.
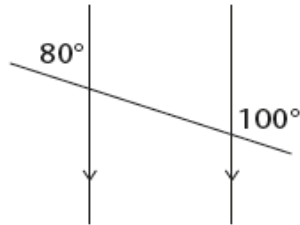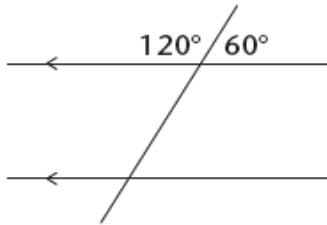
2. The figure below contains $\triangle ABC$ with DE II BC and $B\widehat{D}E = 94^0$.

    Determine the values of *x, y* and *z*, giving reasons for all your answers:

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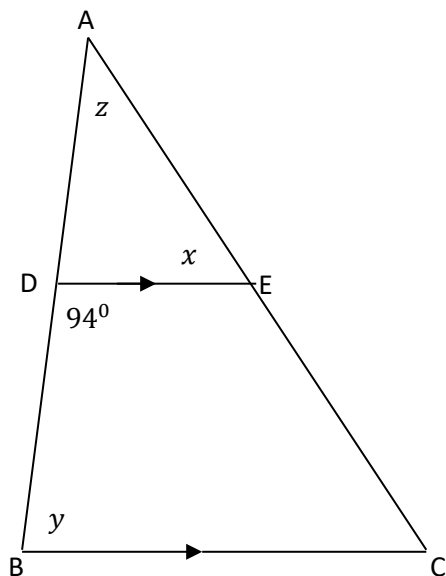
9. CONSOLIDATION/CONCLUSION& HOMEWORK (Suggested time: 5 minutes)

a) **Emphasise that:**
- Transversal is a line that intersects other lines
- Parallel lines are lines that have the same distance apart, the same direction and will never meet each other.
- Corresponding angles are angles in the same relative position at each intersection where a straight line crosses two other.
- Reasons should be written in fully e.g. corr. $\angle s$, DE II BC, because it is only when lines are parallel that corresponding angles are equal.

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
- Sasol-Inzalo Book 1: Page 226, No. 1

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