



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 2D-SHAPES: Solving problems (Lesson 7)

2. CONCEPTS & SKILLS TO BE ACHIEVED:

By the end of the lesson learners should know and be able to solve geometric problems using the relationships between pairs of angles formed by perpendicular lines, intersecting lines and parallel lines cut by transversal.

3. RESOURCES:	DBE Workbook 1, Sasol-Inzalo Book 1, textbooks
4. PRIOR KNOWLEDGE:	<ul style="list-style-type: none"> • angles • solving of equations
<p>5. REVIEW AND CORRECTION OF HOMEWORK (suggested time: 10 minutes)</p> <p>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.</p>	
<p>6. INTRODUCTION (Suggested time: 10 Minutes)</p> <p>The problem dealt with in this lesson will require of learners to set up equations and solve equations containing unknowns. Revise with learners how to solve equations.</p> <p>Give learners the following equations to solve and then discuss the skills they need to have mastered.</p> <p>1. $14x - 6 = 34$</p> <p>2. $9x - 24 = 2 + 4x$</p> <p>Note: To solve an equation the value of the unknown needs to be determined. Manipulate the equation so that the unknown are put on one side of the equation. When unknowns and constants are spread on either side of the equation.</p> <ul style="list-style-type: none"> • isolate the unknowns on one side and constants on the other side. • simplify both sides and • find the value of the unknown 	

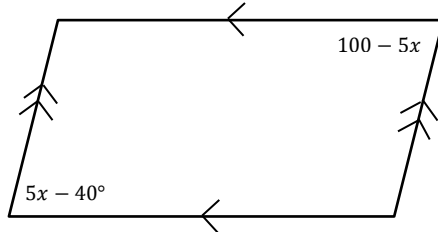
7. LESSON PRESENTATION/DEVELOPMENT (Suggested time: 20 minutes)	
Teaching activities	Learning activities (Learners are expected to:)
<p>Allow learners to use their knowledge of the following:</p> <ul style="list-style-type: none"> • angles on a straight line, • perpendicular lines, • intersecting lines and parallel lines cut by a transversal • the properties of quadrilaterals to solve the following. <p>Let learners work in pairs on the problems and discuss the solutions with the whole class.</p>	<ul style="list-style-type: none"> • Work in pairs and then take part in whole class discussion.



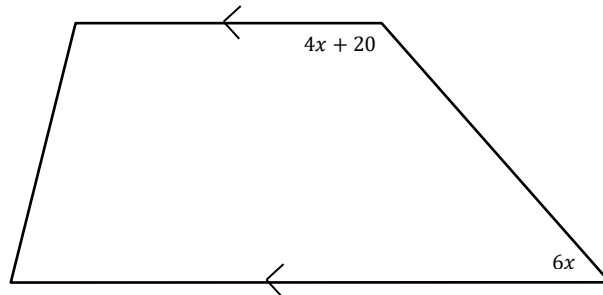
Activity 1

1. Find the value of the unknown and provide the reasons for your statements.

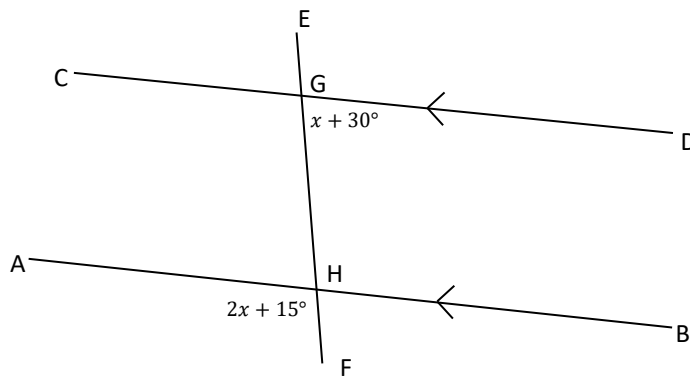
(a)



(b)



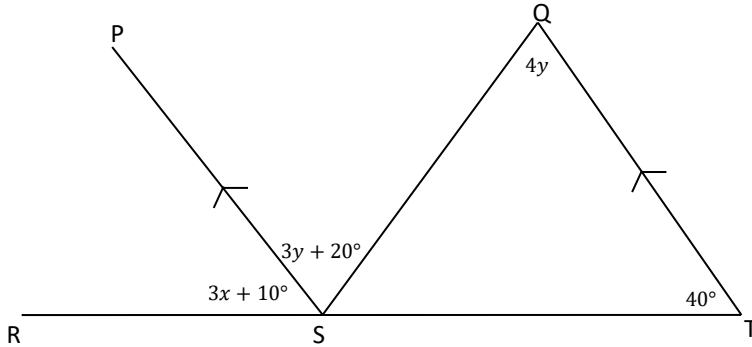
2. In this diagram $AB \parallel CD$, EF is a transversal. Calculate the size of \widehat{HGD} .



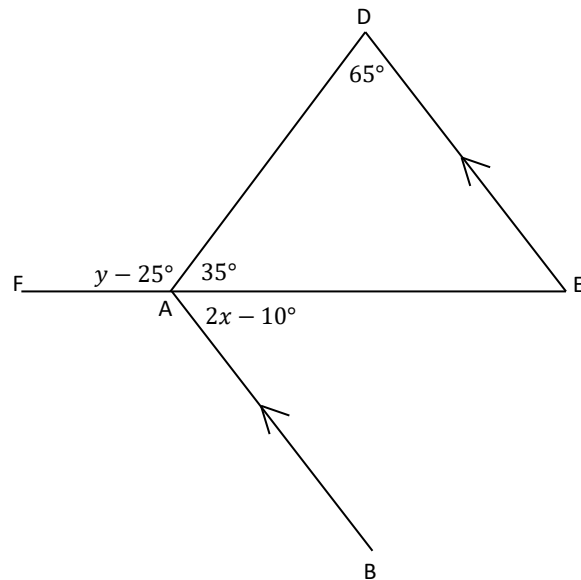
8. CLASSWORK (Suggested time: 15 minutes)

Activity

1. Determine the value of x and y in the following diagram:



2. In the diagram below FBE is a straight line and $AB \parallel DE$



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

a) **Emphasise that:**

- when solving problems use what you know about the angles between parallel lines cut by transversal to decide whether lines are parallel or not.
- it is important to state in your reason that the lines are parallel. These alternate and corresponding angles are equal and co-interior angles are supplementary ONLY if lines are parallel.

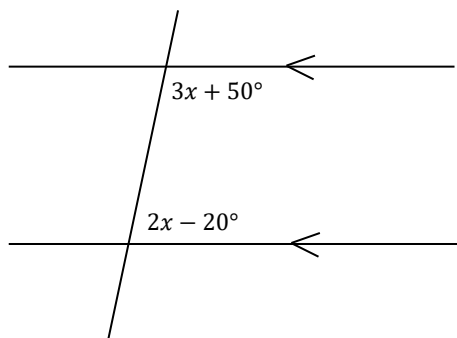
- b) The primary purpose of Homework is to give each learner an opportunity to demonstrate mastery of mathematics skills taught in class. Therefore Homework should be purposeful and the principle of 'Less is more' is recommended, i.e. give learners few high quality activities that address variety of 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

Activity

- a) In each of the following use an equation to help you find the value of the unknown. Always state a reason.



- b) Given that PQRS is a rhombus, determine the unknown values in the diagram

