

# MATHEMATICS AND ICT

## LEARNING EXPERIENCE PLAN SIMILARITY

<b>Educator:</b> Bongani		<b>Date:</b> 18/08/03		<b>School:</b> ZAMAZULU	
<b>L. Experience:</b> Similarity		<b>Grade:</b> 12		<b>Subject:</b> MATHEMATICS	
<b>Critical Outcomes:</b>	<ul style="list-style-type: none"><li>Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made</li><li>Work effectively with others as members of a team, group, organisation, community</li><li>Collect, analyse, organise and critically evaluate information</li></ul>			<ul style="list-style-type: none"><li>Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation</li><li>Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation</li></ul>	
	<b>Plus (out of 5)</b> <ul style="list-style-type: none"><li>Reflecting on and exploring a variety of strategies to learn more effectively</li></ul>			<ul style="list-style-type: none"><li>Exploring education and career opportunities, and</li><li>Developing entrepreneurial opportunities</li></ul>	
<b>Activities of facilitator</b> <ol style="list-style-type: none"><li>Prepare resources</li><li>Organise, arrange and manage groups and classroom</li><li>Mediate and facilitate learning experience</li><li>Give direction and solve arising problems</li><li>Assess performance and progress of individuals and groups</li><li>Adapt delivery schedules and activity levels</li></ol>		<b>Activities of Learners</b> <ol style="list-style-type: none"><li>Use workbook to draw parallel lines in triangles</li><li>Measuring/manipulating sides as ratios in triangles</li><li>Calculating missing sides/distances in triangles</li><li>Measuring/matching equal angles in pairs of triangles</li><li>Proving similar triangles by finding equal angles or proportional sides</li><li>Manipulating / working with right-angled triangles</li></ol>		<b>Resources</b> <ol style="list-style-type: none"><li>Protractors and rulers (learners to supply)</li><li>Calculators (learners to supply)</li><li>LSM, (worksheets for each learner)</li><li>Transparencies and overhead projector</li><li>Learners’</li></ol>	
				<b>Assessment Strategies</b> <ol style="list-style-type: none"><li>Questioning and observation for information guidance</li><li>Self-assessment task after each activity</li><li>Group-assessment task by group members</li><li>Educators’ final assessment task (same as self- and group-task)</li><li>Short test on learning experience</li></ol>	
				<b>Estimated Time</b> <ol style="list-style-type: none"><li>Drawing parallel lines: 30 min</li><li>Measuring / manipulating (ratios): 30 min</li><li>Calculating missing sides/distances: 60 min</li><li>Proving similar triangles: by equal angles: 60 min by proportional sides: 60 min</li><li>Right-angled triangle: 60 min (optional)</li></ol> Total approx. 300 minutes (1 week)	
<b>Expanded Opportunities:</b> Formal proof of theorems and exercises				<b>Enrichment:</b> Right-angled triangles, previous exam questions	
<b>Special Needs:</b> Additional worksheets of lower & challenging levels				<b>Homework:</b> Write up answers to questions. Similarity problems worksheet	

