

Lesson Plan: Solving Linear Equations

Class: Senior Two (S2) **Subject:** Mathematics **Topic:** Solving Linear Equations **Duration:** 60 minutes **Alignment with Uganda's Lower Secondary Curriculum:** This lesson aligns with the Mathematics syllabus for S2, specifically under Algebra, where learners are expected to understand and solve simple linear equations with one variable, using real-life contexts to build problem-solving skills and critical thinking.

Lesson Objectives: By the end of the lesson, learners will be able to:

1. Explain what a linear equation is using simple words and real-life examples.
2. Solve simple linear equations with one unknown step by step.
3. Use linear equations to solve everyday problems, like sharing items or market buying.

Teaching Materials: Chalkboard, chalk, drawings of mangoes on the board, and simple objects like stones or sticks to represent variables (available in the school compound).

Note: The lesson uses real-life examples such as sharing mangoes among friends or buying items at a market to make variables and equations easy to understand. All explanations are in simple English.

Time / Stage	Teacher Activity	Learners' Activity	Indicators for Assessment
0-5 minutes Introduction	Greet learners and ask them to think about a real-life situation: "If you have 10 mangoes and want to share them equally among 5 friends, how many does each get?" Explain that this is like solving an equation where 'x' is the unknown number of mangoes per friend (e.g., $5x = 10$). Write the objective on the board and link it to everyday life.	Listen, respond to the question, and share their own examples of sharing items like bananas or sweets.	Learners can give correct simple examples; teacher notes participation to check prior knowledge (formative: verbal responses).
5-15 minutes Explanation of Concepts	Explain what a linear equation is: "A linear equation is a maths sentence with an equal sign (=) and one unknown, like x, that we need to find." Use the board to draw mangoes and write examples: e.g., "If John has 3 mangoes and picks some more to make 8, how many did he pick? ($3 + x = 8$)". Step by step: Subtract 3 from both sides to get $x = 5$. Use market example: "You	Listen, ask questions if unclear, and repeat the steps in their own words when asked.	Learners explain steps correctly; teacher observes understanding through questions like "Why do we subtract from both sides?" (formative: critical thinking in responses).

	buy tomatoes for Shs 2000 and pay Shs 5000, how much change? ($5000 - 2000 = x$). Stress balancing both sides like a scale.		
15-30 minutes Guided Practice	Guide learners through 3 examples on the board. Example 1: "Share 12 mangoes among 4 friends: $4x = 12$ ". Solve together: Divide both sides by 4, $x=3$. Example 2: Market - "Bananas cost Shs 1000 per bunch. You spend Shs 3000 for y bunches: $1000y = 3000$ ". Solve: $y=3$. Example 3: "Aunt gives 7 sweets, you had some to make 10: $z + 7 = 10$ ". Solve: $z=3$. Ask learners to suggest steps and correct errors. Use sticks to show adding/subtracting.	Work in pairs to suggest next steps, discuss why each step works, and solve on paper. One pair shares their answer with the class.	Learners participate actively and correct each other; teacher checks pair discussions for accuracy and critical thinking (formative: peer feedback and teacher observation).
30-45 minutes Learner Exercises (Independent Practice)	Give exercises: Solve these on your own. 1. $2x = 6$ (sharing 6 oranges between 2). 2. $x + 4 = 9$ (adding 4 kg maize to make 9 kg). 3. $5x - 10 = 20$ (market: 5 items at Shs 10 less than Shs 20 total after discount). 4. $x/3 = 4$ (dividing 12 mangoes into 3 groups). Walk around to help. Promote thinking: "How does this relate to real life?"	Solve exercises individually in notebooks, then compare answers with a neighbor and explain their steps.	Learners solve at least 3 out of 4 correctly; teacher reviews notebooks for step-by-step work and real-life links (formative: written work and explanations).
45-55 minutes Assessment Questions	Ask oral questions: 1. What is a linear equation? Give an example. 2. Solve: $3a = 15$. What real-life situation fits? 3. If $b - 2 = 5$, find b. Why balance both sides? Write 2 more on board for quick solve. Discuss common mistakes.	Answer questions individually or in groups, explain answers, and create their own real-life equation to share.	Learners answer correctly and explain; teacher notes who can create own equations (formative: oral and written responses showing critical thinking).
55-60 minutes Summary and Closure	Summarize key points: "Today we learned to solve linear equations by balancing sides, using examples like mango sharing." Ask: "What did you learn? How will you use it?"	Share one thing learned, suggest homework ideas, and pack up.	All learners participate in summary; teacher assesses overall engagement and understanding

	Assign homework: Create 2 real-life equations and solve them.		(formative: exit responses).
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