

Teacher: Sheila Mitchell	Content Area: Algebra I	Grade Level: 9	Date:	Day:
Overview/Annotation: This lesson contains a PowerPoint presentation about solving literal equations. There is an opportunity for the students to complete an interactive worksheet on the computer. There is also a worksheet provided for them to take home for extra practice if needed.				
Course of Study Standard and Objective: Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. [A-CED4]				
Lesson Outcome: Students will solve literal equations for specified variables.				
Before: Share with the students that electricity and electronics depend on formulas and equations to express relationships and concepts, and to solve all types of problems. They must be able to translate verbal problems into mathematical formulas and be able to work with formulas. They need to develop the ability to apply and manipulate formulas and solve formulas for different variables.				
<p>During: Use the PowerPoint at the link below to explain how to solve literal equations. http://alex.state.al.us/uploads/23922/PowerPoint%20-%20Solving%20Literal%20Equations.ppt</p> <p>Have the students, working in cooperative groups; solve the following formulas for the indicated letters. Answers are provided in red.</p> <ol style="list-style-type: none"> $P = VI$; I... $I = P/V$; V... $V = P/I$ (P = power in a circuit) $V = P/I$; P... $P = VI$ (V = voltage in a circuit) $C = 2\pi r$; r... $r = C/2\pi$ (C = circumference of a circle) $A = lw$; w... $w = A/l$; l... $l = A/w$ (A = area of a rectangle) $I^2 = P/R$; P... $P = I^2R$ (I = current in a circuit) $R = V^2/P$; P... $P = V^2/R$ (R = resistor in a circuit) $a = F/m$; F... $F = am$; m... $m = F/a$ (a = acceleration of a body) 				
<p>After: Students needing additional practice may be assigned the worksheet found at the link below. http://alex.state.al.us/uploads/23922/Worksheet%20-%20Solving%20Literal%20Equations.doc Worksheet answers can be found at the link below. http://alex.state.al.us/uploads/23922/Worksheet%20Key%20-%20Solving%20Literal%20Equations.JPG</p>				