

Strategic Problem-Solving Worksheet

Group: _____

Date: _____

MODEL: What models, physical laws, or general physics concepts should be applied? What are you looking for? What assumptions or estimations are needed? Guesstimate a reasonable answer with units. Consider limiting cases.

VISUALIZE: Draw a pictorial diagram labeled with variables your model. What is known? What is not? The diagram should suggest the approach that you are taking in solving the problem. Draw any physics diagrams that would be useful.

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SOLVE: Write down the equations that apply to this problem. Indicate in WORDS how you plan to solve the problem. Algebraically solve for the unknown variable in terms of the known variables. Substitute known values and calculate answer.

ASSESS: Is your result believable? Does the algebraic result make sense for any limiting cases that might improve your understanding of the result?? Does the answer agree with the prediction in your Model? Check your answer and units. Why was this problem assigned?