PRACTICING THE G.U.E.S.S. METHOD

Names of team members:

The **G.U.E.S.S.** method is an algorithm (procedure) for solving physics word problems that involves five steps.

- G: Identify your G.iven quantities
- U: Identify your U.known, the quantity you are trying to find
- E: Choose your working E.quation, the formula that includes the givens and the unknown.
- S: S.ubstitute the given values into your equation.
- S: S.olve for your unknown quantity. Don't forget the units!

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DIRECTIONS: Each person in your group takes one step of the problem and does it and passes it to the next person who completes the next step.

Problem 1: A 30 kg wrecking ball has a velocity of 40 m/s at the bottom of its swing. From what height (in m) was it dropped?



INITIALS

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| does it and passes it to the next person who completes the next ste | p. | |
| Problem 2: A crate of mass 400 kg | | |
| is dropped from a height of 4 m onto a | | |
| spring of spring constant (k) = 5200 | | |
| N/m. How much did the crate | | |
| compress the spring (in m)? | INITIALS | |
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| does it and passes it to the next person who completes the next step. | | |
| Problem 3: A 4 kg bowling ball is | | |
| thrown off an amateur bowler's finger with a | | |
| horizontal velocity of 5 m/s from a height of | | |
| 1.5 m off the ground. How fast is the bowling | | |
| ball moving right before it hits the lane at | | |
| ground level? | INITIALS | |
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Problem 4: A defensive lineman applies a force of 50,000 N to a receiver through a distance of 0.5 m over a time span of 3 seconds. How much power (in Watts) did the lineman use?



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Problem 5: A 2200 kg car is moving at 15 m/s. After a few seconds it is

moving at 30 m/s. How much work (in J) was done on the car to get it up to its new velocity?



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SUBSTITUTE:

SOLVE: