## Procedure of Solving a Physics Problem

Question: A 1.0 kg -block with a velocity of $2.0 \mathrm{~m} / \mathrm{s}$ collides with a stationary block whose mass is 3.0 kg . They stick together after the collision. Calculate the final velocity of the two blocks.

## Solution:



| In this collision the total momentum is conserved. | $\leftarrow$Step 1: Briefly state the physics <br> principle you are using. |
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Step 99: Check in your mind if the result is reasonable. For example, if you find $v=50 \mathrm{~m} / \mathrm{s}$ in this problem, then it might not be true because the system shouldn't gain kinetic energy in the collision. You also cannot find a child runs $20 \mathrm{~m} / \mathrm{s}$, or a watermelon weighs 100 kg .

Step 100: Leave some space for your future notes.

