

## DATA SHEET: "BOUNCING BALL" LAB

R1

\*\*\*IMPORTANT - FOR ALL CALCULATIONS: MASS OF BALL = 50 (GRAMS), GRAVITY = 9.8 (METERS/SECOND)<sup>2</sup>\*\*\*

<p>1. HEIGHT BEFORE DROP: <u>160 cm.</u></p>	<p>9. HEIGHT IN METERS : HEIGHT IN CM ÷ 100= _____</p>	<p>17. POTENTIAL ENERGY BEFORE DROP = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>25. VELOCITY BEFORE DROP = <u>0</u></p>	<p>33. KINETIC ENERGY BEFORE DROP = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> <u>0</u> <math>^2 =</math> <u>0</u></p>
<p>2. HEIGHT AT 1<sup>ST</sup> BOUNCE IMPACT WITH GROUND = 0</p>	<p>10. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 <u>0</u></p>	<p>18. POTENTIAL ENERGY AT 1<sup>ST</sup> IMPACT = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> <u>0</u> <math>m =</math> <u>0</u></p>	<p>26. VELOCITY OF DROP (lab part two: <del>velocity box A</del>):</p>	<p>34. KINETIC ENERGY OF DROP = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> _____ <math>^2 =</math> _____</p>
<p>3. HEIGHT OF PEAK OF 1<sup>ST</sup> BOUNCE: _____ cm.</p>	<p>11. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 _____</p>	<p>19. POTENTIAL ENERGY AT PEAK OF 1<sup>ST</sup> BOUNCE = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>27. VELOCITY AT PEAK OF 1<sup>ST</sup> BOUNCE = <u>0</u></p>	<p>35. KINETIC ENERGY AT PEAK OF 1<sup>ST</sup> BOUNCE = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> <u>0</u> <math>^2 =</math> <u>0</u></p>
<p>4. HEIGHT AT 2<sup>ND</sup> BOUNCE IMPACT WITH GROUND = 0</p>	<p>12. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 _____</p>	<p>20. POTENTIAL ENERGY AT 2<sup>ND</sup> IMPACT = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>28. VELOCITY OF FALL AFTER 1<sup>ST</sup> BOUNCE (lab part two: <del>velocity box B</del>):</p>	<p>36. KINETIC ENERGY OF FALL AFTER 1<sup>ST</sup> BOUNCE = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> _____ <math>^2 =</math> _____</p>
<p>5. HEIGHT OF PEAK OF 2<sup>ND</sup> BOUNCE: _____ cm.</p>	<p>13. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 _____</p>	<p>21. POTENTIAL ENERGY AT PEAK OF 2<sup>ND</sup> BOUNCE = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>29. VELOCITY AT PEAK OF 2<sup>ND</sup> BOUNCE = <u>0</u></p>	<p>37. KINETIC ENERGY AT PEAK OF 2<sup>ND</sup> BOUNCE = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> <u>0</u> <math>^2 =</math> <u>0</u></p>
<p>6. HEIGHT AT 3<sup>RD</sup> BOUNCE IMPACT WITH GROUND = 0</p>	<p>14. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 _____</p>	<p>22. POTENTIAL ENERGY AT 3<sup>RD</sup> IMPACT = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>30. VELOCITY OF FALL AFTER 2<sup>ND</sup> BOUNCE (lab part two: <del>velocity box C</del>):</p>	<p>38. KINETIC ENERGY OF FALL AFTER 2<sup>ND</sup> BOUNCE = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> _____ <math>^2 =</math> _____</p>
<p>7. HEIGHT OF PEAK OF 3<sup>RD</sup> BOUNCE: _____ cm.</p>	<p>15. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 _____</p>	<p>23. POTENTIAL ENERGY AT PEAK OF 3<sup>RD</sup> BOUNCE = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>31. VELOCITY AT PEAK OF 3<sup>RD</sup> BOUNCE = <u>0</u></p>	<p>39. KINETIC ENERGY AT PEAK OF 3<sup>RD</sup> BOUNCE = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> <u>0</u> <math>^2 =</math> <u>0</u></p>
<p>8. HEIGHT AT 4<sup>TH</sup> BOUNCE IMPACT WITH GROUND = 0</p>	<p>16. HEIGHT IN METERS : HEIGHT IN CM ÷ 100 _____</p>	<p>24. POTENTIAL ENERGY AT 4<sup>TH</sup> IMPACT = <math>M \cdot G \cdot H =</math> <math>50 \cdot 9.8 \cdot</math> _____ <math>m =</math> _____</p>	<p>32. VELOCITY OF FALL AFTER 3<sup>RD</sup> BOUNCE (lab part two: <del>velocity box D</del>):</p>	<p>40. KINETIC ENERGY OF FALL AFTER 3<sup>RD</sup> BOUNCE = <math>\frac{1}{2} M \cdot V^2 =</math> <math>\frac{1}{2} \cdot 50 \cdot</math> _____ <math>^2 =</math> _____</p>