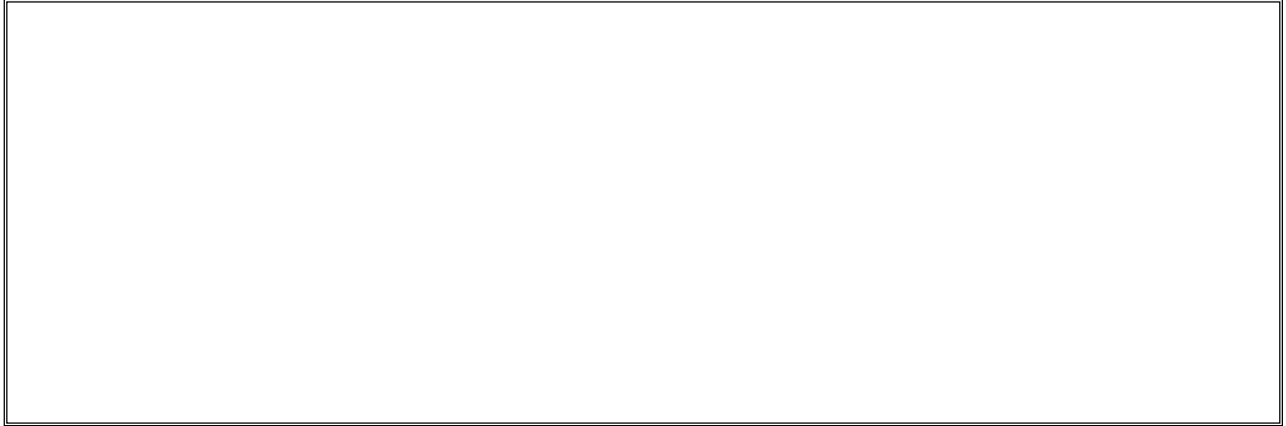


# Final Test Course

**Directions:** Complete the following worksheet as you test your vehicle on the Final Test Course

- 1) In the space provided below, diagram the test course from the side view. Label where potential and kinetic energy will be the least and the most.



- 2) Explain what happens to the kinetic energy of the vehicle as it goes up an incline.

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- 3) Explain what happens to the kinetic energy of the vehicle as it goes down a decline.

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- 4) In your own words, describe the relationship between kinetic and potential energy.

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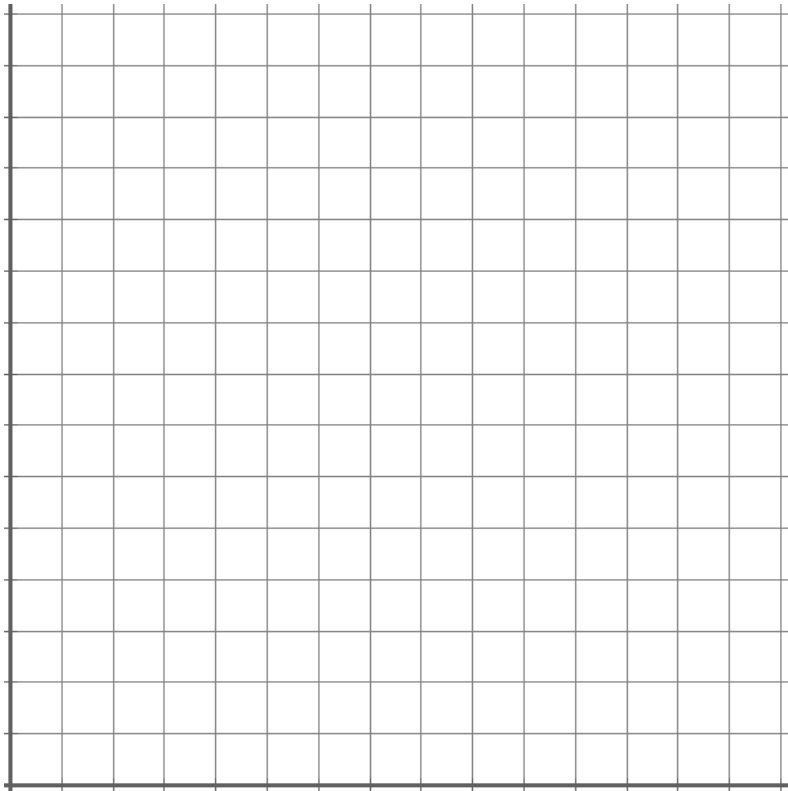
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Record your three fastest trials and graph them below.

Trial Number	Time (X-Axis)	Distance (Y-Axis)
1		
2		
3		
AVERAGE		

Graph your results below:

Each trial should have its own line, starting at the origin and going through the point generated by your data. Be sure to include the average of your three trials as well.



### Analyze your graph

Which of your three trials has the highest speed?

What was the average speed of your car?

What was the furthest distance traveled by your car?

Did you notice any patterns in your data?

- 5) Reflect on your build process and the investigations you conducted, what changes would you make to your vehicle? Explain.

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