# Collision lab Practical: Testing your model !!!

## Practice problem using data, graph, motion map, and equations

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| Two toy cars start 10 m apart, headed towards each other. The red car moves at 1.2 m/s, and the blue car has a speed of 0.8 m/s. Determine the location where they will collide.We will start the **red  /  blue** (circle one) car at 0 m, and the **red  /  blue** (circle one) car at 10 m. |
| Fill in the Data table | Plot a graph of your motion |
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| Time (s) | Red car position (m) | Blue car position (m) |
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Collision position & time:  | Collision position & time: |
| Draw a mOTION MAP of your motion |
| Collision position & time: |
| Solve using Two equations and two unknows |
| Red car equation:Blue car equation:Combine equations, rearrange, and solve for the collision location and time.Calculated collision position & time: |

##  Predict the collision Position and time for real toy cars

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| Your two cars start 4 m apart and are headed towards each other. **Record you measured velocities here**: The red car has a velocity of \_\_\_\_\_\_\_ m/s, and the blue car has a velocity of \_\_\_\_\_\_\_ m/s.We will start the **red  /  blue** (circle one) car at 0 m, and the **red  /  blue** (circle one) car at 4.0 m. |
| Fill in the Data table | Plot a graph of your motion |
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| Time (s) | Red car position (m) | Blue car position (m) |
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Collision position & time:  | Collision position & time: |
| Draw a mOTION MAP of your motion |
| Collision position & time: |
| Solve using Two equations and two unknows |
| Red car equation:Blue car equation:Combine equations, rearrange, and solve for the collision location and time.Calculated collision position & time: |