

Name: _____

Date: _____

Reviewing Force and Velocity: Blue

Part 1: Test

1. Select **2.5 Blue Mission 1** from the *Force and Motion* Sim menu and read the mission prompt.
2. Press RUN and record the mass of each object:

Object A: _____ kg Object B: _____ kg Object C: _____ kg

3. Press PREPARE FORCE.
4. Set up the forces and test your results.
 - Use the Force panel to set the force strength and direction for each object (A, B, and C).
 - Press EXERT FORCE.
 - Observe the objects. Did they reach the targets at the requested velocity?
(**Hint:** Press ANALYZE for data about velocity. Use the scrubber to view data about force strength.)
 - If yes, record the Force Strength/Direction and go on to the next mission.
 - If no, press RESET and try again with a different direction or strength of force.

Mission	Object A: Force Strength/ Direction	Object B: Force Strength/ Direction	Object C: Force Strength/ Direction
2.5 Blue Mission 1			
2.5 Blue Mission 2			
2.5 Blue Mission 3			

5. After you complete Part 1, go on to Part 2.

Reviewing Force and Velocity: Blue (continued)

Part 2: Predict

1. If you exert the same strength force on two objects, one with a greater mass and the other with less mass, which object will reach the target first?

<input type="radio"/>	a. the object with a greater mass	<input type="radio"/>	b. the object with less mass	<input type="radio"/>	c. both objects at the same time
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2. What should you do to make sure that both objects reach the target at the same time?

Part 2: Test

1. Complete three missions: **2.5 Blue Mission 4**, **2.5 Blue Mission 5**, and **2.5 Blue Mission 6**.
2. Select a mission and read the prompt.
3. Press RUN and then press PREPARE FORCE.
4. Set up the forces and test your results.
 - Use the Force panel to set the force strength and force direction for each object (A and B).
 - Press EXERT FORCE.
 - Observe the objects. Did they reach the targets at the same time?
 - Press ANALYZE and use the scrubber for data about force strength.
 - Record the Force Strength/Direction and go to the next mission if you were successful.
 - If not, press RESET and try again with a different direction or strength.

Mission	Object A: Force Strength/Direction	Object B: Force Strength/Direction
2.5 Blue Mission 4		
2.5 Blue Mission 5		
2.5 Blue Mission 6		

5. After you finish, answer the reflection questions on your Amplify Science screen.