## Physics I <br> Chapter 3 Assignment 2

$\qquad$ Period

1. A 2.0 kg ball is fired from a cannon at $50 \mathrm{~m} / \mathrm{s}$ at an angle of $53^{\circ}$ above horizontal. It hits a wall 220 m away. Choose from the arrows to the right in

2. Which vector best represents the direction of the velocity at point 1 ?
3. Which vector best represents the direction of the acceleration at point 1?
4. Which vector best represents the direction of the velocity at point 2?
5. Which vector best represents the direction of the acceleration at point 2?
6. Which vector best represents the direction of the net force on the ball at point 1 ?
7. Which vector best represents the direction of the net force on the ball at point 2?
8. What is the horizontal component of the ball's velocity just after launch at point 0 ?
9. What is the vertical component of the ball's velocity just after launch at point 0 ?
10. How fast is it going at the very top of its trajectory?
11. How much time does it take the ball to get to the very top of its trajectory?
12. What is the horizontal component of velocity just before it hits the wall?
13. How much time does it take for the ball to reach the wall?
14. What is the vertical component of velocity just before it hits the wall?
15. How high up on the wall does the ball hit?
