

Name: \_\_\_\_\_  
Class Period: \_\_\_\_\_

### Kinematics in Two-Dimensions: Extra Credit

**Bonus 1:** A projectile shot at an angle of  $60.0^\circ$  above the horizontal strikes a building 24.4 m away at a point 14.6 m above the ground. Find the initial velocity ( $v_0$ ) with which the projectile was shot. See Figure 1.

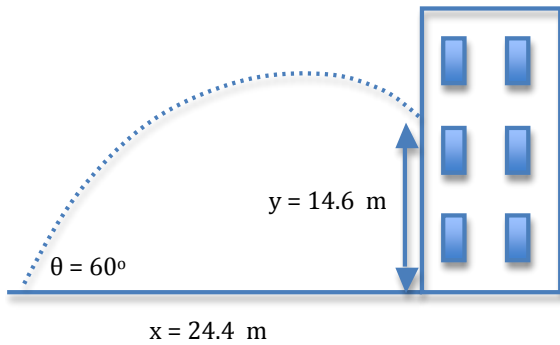


Figure 1

**Bonus 2:** In baby Landon's dreams, he is a stunt tricycle driver. In one dream, he must jump across a canyon 12.0 m wide. He leaves the edge of the cliff of the canyon off a ramp angled by  $15.0^\circ$ . With what initial velocity must Baby Landon leave the ramp to make the jump? (I promise you have enough info to solve this problem!)