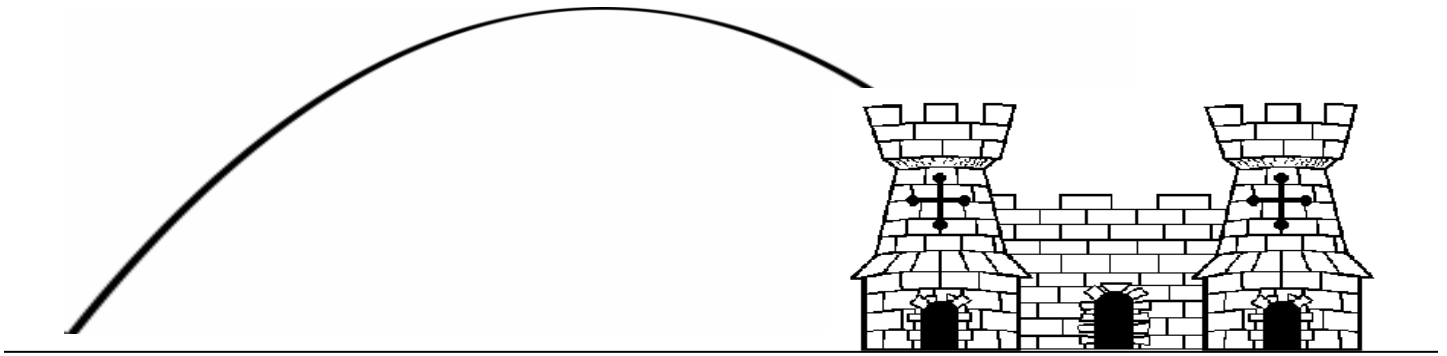


UNIT 4 (PART II) ANGLED PROJECTILES ASSESSMENT



BAGKGROUND: The diagram above shows the trajectory of an arrow launched at a castle by my main man Robin Hood. The Russel Crowe Robin Hood, not Kevin Costner. The arrow was launched **65** degrees above the horizontal at a velocity of **46.0 m/s**. The arrow strikes one of the battlements at the top of a tower some **36.2** meters high. *You must show ALL of your work set up correctly in appropriate formula to get full credit!! I'm serious!! Don't forget to use the V_o and convert it to either V_{ox} or V_{oy} accordingly (horizontal or vertical)*

WHAT IF THE CASTLE WASN'T THERE?

1. If the castle was not there, how long would the arrow have been in the air?
2. If the castle was not there, how far would the arrow have flown?
3. What was the highest altitude the arrow reached?

BUT.... THE CASTLE IS THERE

4. How long did it take the arrow to strike the castle?
5. How far away was Robin Hood when he fired the arrow?