Projectiles

These are problems that involve motion in the x and y direction. For most cases, we assume no air resistance so, in terms of vertical motion, the only applicable acceleration is gravity, and for horizontal there is no acceleration therefore a constant velocity.

Time is the variable that connects the horizontal and vertical components.

Apex of a motion (zenith): The “top” of the parabolic motion. How high an object goes.

Ex1: If Jill throws a baseball with a velocity of 23m/s at an angle of 33.30above the horizontal. How far should Blob be from Jill assuming Blob is the same height?

Ex 2: Find the final vertical velocity of the football. Then, find the overall final velocity. (Using info from Ex 1).