

Projectiles at an angle starting and landing at same height.

Ex 1: A football is kicked with an initial velocity of 20.0 m/s at an angle of 37.0° above the horizontal. It lands at the same height from which it was kicked.

a) sketch the ball's trajectory

b) find the range of the football

b) Find the max height reached by the football.

c) time in the air (hang time)

(d) velocity at maximum height

(e) acceleration at maximum height

Ex.2. A frog can jump at a speed of 0.10m/s . If the frog always leaps at an angle of 45° to the horizontal, how long would it take it to leap a horizontal distance of 120m ?

Symmetry...