

Week 20 Upward Throws

Wkt 3: Max Height

Name: _____

$d = -5t^2$
$v_f = v_i - 10t$
$(v_f = 0 \text{ at the top})$



1. A ball is thrown upward at 30 m/s.
 - a) How high up will it go?



2. The Toy Projectile Launcher shoots a ball. It takes 2 seconds to get to the top, and 2 seconds to fall back down.
 - a) How fast did it shoot?
 - b) How fast is it going when it comes back down?

3. A rifle is shot straight up at 850 m/s.
 - a) How high up would the bullet go?
 - b) WHY SHOULD YOU NEVER EVER DO THIS?

Launch Speed and Max Height for Your Underhand Throw

Throw a tennis ball underhand as straight up as you can. Time the entire up and down.

Time for the entire up and down = _____ s.

What time did it take to get to the top?

Calculate the launch speed of your throw.

Calculate the max height of your throw.