

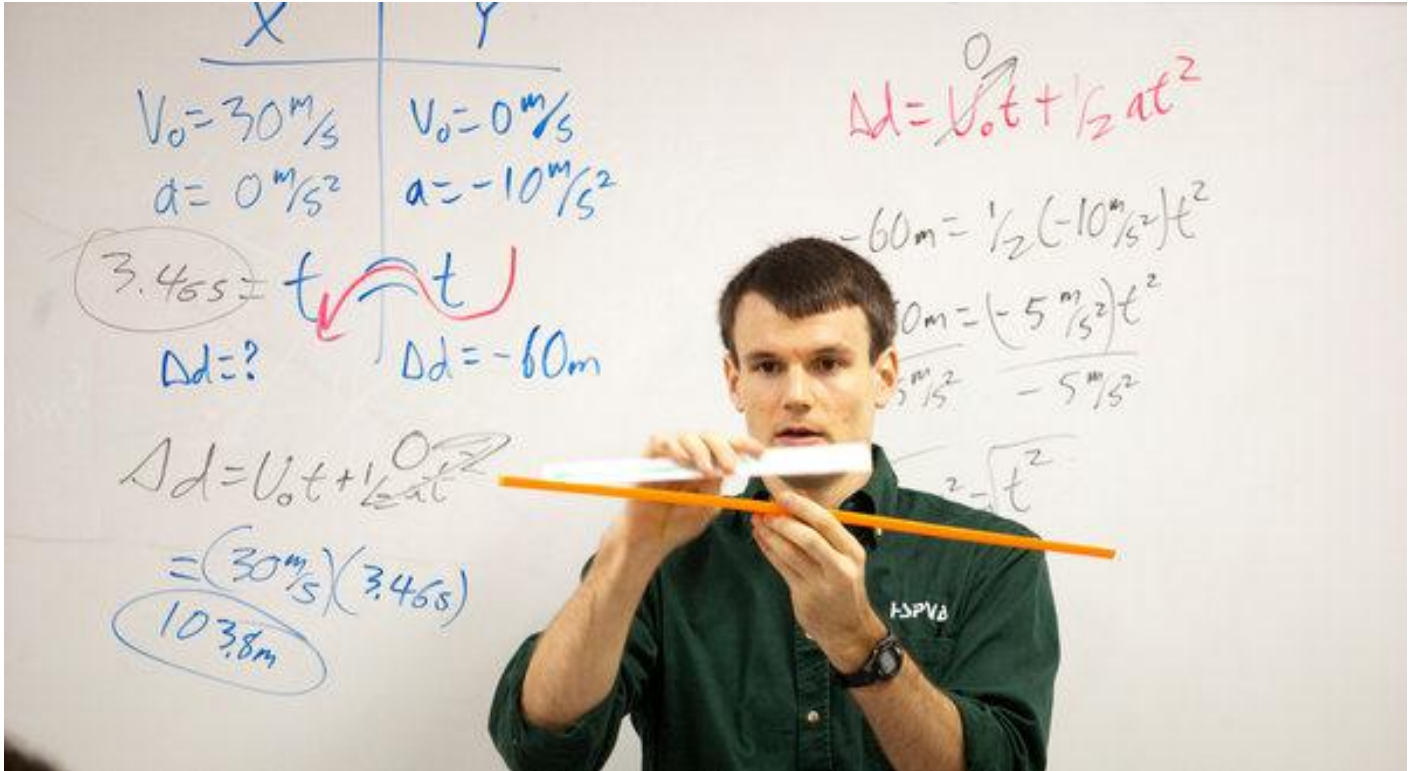
# PROJECTILE MOTION

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THE TEXAS TRIBUNE

## Strain for Teachers Runs Deeper Than Budget Cuts



Eastman Landry teaches a physics class at the High School for the Performing and Visual Arts in Houston.

When Liz Peterson, a Teach for America alumna, became an educator 14 years ago, she thought of teaching as a form of social justice. She felt the call to teach because she wanted to help close the achievement gap between poor students and their more affluent peers. But in August, as the new school year began, Ms. Peterson found herself teaching somewhere she had never imagined she would. "I never ever, ever considered teaching at a private school," Ms. Peterson said. "That was never a thought in my mind." Since the Legislature eliminated more than \$5 billion in financing from public education in 2011, some early results are easily quantifiable — like the approximately [25,000 employees](#) shed from the state's schools and the more than 6,200 additional elementary school classes that have more than 22 students.

**INTRODUCTION:** On the white board above is a projectile problem. Note how the teacher broke the solution into horizontal(X) and vertical parts(Y).

**QUESTION:** (a) Sketch and explain question asked of the projectile as seen in the graphic above? (b) Write down known initial condition variables in the horizontal and vertical direction and solve for the variable asked for? (c) Find the vertical velocity after 3.46 s? (d) What is horizontal component of velocity after 3.46 s? (e) What is the resultant velocity(magnitude and direction) after 3.46 s?

**ANSWERS:** (a) \_\_\_\_\_ (b) \_\_\_\_\_, (c) -33.9 m/s, (d) 30 m/s,  
(e) 45.27 m/s @ 48.5° below + X axis