Introduction to Mechanics
Course Review

Lana Sheridan

De Anza College

Mar 19, 2020

Topics Covered

- units, unit conversions, dimensional analysis, significant figures, order of magnitude

- kinematics
  - motional quantities
  - graphs of motional quantities against time
  - the kinematics equations (motion with constant acceleration)
  - free fall
  - motion in 1 and 2 dimensions
  - vectors and trigonometry
  - relative motion
  - projectile motion

Topics Covered

- forces
  - free body diagrams
  - weight and gravity
  - tension and pulleys
  - normal force
  - friction
  - springs

- Newton's laws
  - inertia and mass
  - net force and acceleration
  - action-reaction pairs of forces

- applying Newton's laws
  - static equilibrium
  - objects moving together
  - the Atwood machine & variants
  - circular motion and centripetal acceleration
  - nonuniform circular motion (not on final)

Questions

What do you want to go over / discuss?

Summary

- review of topics

Final Exam, Thursday, Mar 26, by Canvas & Zoom, be ready at 9am.

Exam Test Run, by Canvas & Zoom. Tomorrow...?

Homework
Study!