

Physics 112

Tuesday, January 9/18

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1. Questions?
SA - U3: S2&3
2. Exam Review - Problem #2 (10 minutes)
3. Handouts
5. Frequency and Period
6. Wave Speed
7. [Worksheet - Waves: Frequency, Period and Wave Speed - HW](#)

8. Summary - Measures of A Wave
9. Concepts - U4: S2 - Wave Behaviors
10. Reflection
11. Diffraction
12. Refraction

P112 - Exam Review - Problem #2

General Kinematic Prob.

A car moving with a velocity of 3.45 m/s [W] accelerates uniformly for 5.21 s over a distance of 110 m . Determine the final velocity of the car.

38.8 m/s [W]

Physics 122

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Mrs. Stewart's Roller Coasters

1. Exam Topics and Format
 2. Worksheet - Textbook: C15, Page 708, #16-20
Worksheet - Textbook: C15, Page 714, #21-25
Worksheet - Textbook: Page 737, #40-42
Page 744, #46-50
 3. Series -> Textbook: Page 719, C15 - PP#27-31
 4. Parallel Circuits
 5. Parallel -> Textbook: Page 724, C15 - PP#32-35
 6. Combination/Complex Circuits
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7. Complex -> Textbook: Page 728, C15 PP#36-37
 8. **SA - U3 - S2 - Electric Circuits -> Friday, January 12/18**
 - MC: 10 max
 - Problems: electric current ($I = q/t$)
resistance in a wire ($R = \frac{\rho L}{A}$)
power ($P = IV$)
complex circuit
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Physics 122/121 - Topics - Final ExamUnit 1

- > force problems
 - push/pull
 - suspended objects
 - incline plane
- > static torque
 - horizontal
 - involving an angle
- > relative velocity (boat, plane and intersection problems)
- > collisions
 - 1 D
 - simple
 - elastic/inelastic
 - 2D
 - collision/explosion

Unit 2

- > projectiles
 - horizontal
 - fired at an angle
- > circular motion
 - horizontal circular motion
 - banked and unbanked curves
- > Kepler's Laws (3)
- > Law of Universal Gravitation
- > g, v and T of satellites, moons, planets, etc.
- > SHM
 - pendulum
 - mass on a spring

Unit 3

- > electrostatics
 - types of electrical charges (2)
 - transfer of charge between identical objects/conservation of energy
 - charging objects
 - by electrification by friction
 - by conduction
 - by induction
 - electric force - Coulomb's Law
 - 2 charges
 - 3 charges
 - electric fields
 - diagrams
 - electric field strength
 - electric potential energy
 - electric potential difference
- > electric current
 - conventional current/electron flow
 - circuit symbols
 - open/closed circuits
 - ammeters/voltmeters
 - resistance in a wire
 - Ohm's Law
 - power
 - circuits
 - VIR chart
 - series
 - parallel
 - complex

P122 - January 2018

Format - multiple choice = 20
problems = 10

1. push/pull OR inclined plane problem
2. circular motion OR relative velocity
3. static torque problem
4. 2D collision/explosion
5. projectile fired at an angle
6. Law of Universal Gravitation and
g, v and T of satellite or planet, etc.
7. SHM - mass on a spring
8. Coulomb's Law - 3 charges
9. electric field - diagram, magnitude and direction
10. circuit - complete VIR chart

Science 10

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1. **Roller Coasters - Due: Wednesday, Jan. 17/18**
 2. Questions?
[Worksheet: Constant and Average Velocity Problems](#)
 3. FA - Constant Velocity/Average Velocity (See Next Page)
 4. Position vs Time Graphs and Examples
 5. [Worksheets: Position vs. Time Graphs - HW](#)
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6. Velocity vs Time Graphs
 7. Worksheet - Velocity vs Time Graphs
 8. Acceleration
 9. Comparing Directions of Velocity and Acceleration
 10. Sample Problems -Acceleration
 11. Worksheet - Acceleration

FA - Constant Velocity/Average Velocity

How long would it take a car to travel 200.0 km [W] if it is traveling at a constant velocity of 55.0 km/h [W]?