

# Physics 112

Thursday, November 22/18

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1. FA - Momentum  
FA - Change in Momentum } Deadline - Nov. 22/18 (Thursday)  
FA - Impulse
  2. FA - Impulse-Momentum Theorem - Checked in Class Yesterday
  3. Questions?  
Worksheet - C5 - Impulse-Momentum Thm. Page 203, PP #33-35  
- Mixed Page 209, PFU #37-45  
Worksheet - Extra Momentum, Impulse and Impulse-Momentum  
Theorem Problems  
Worksheet - MC - Momentum, Impulse, Impulse-Momentum Thm.
  4. SA: U2-S3 - Momentum, Impulse and Impulse-Momentum Theorem  
- Topics - See Next Page  
- Date - Tuesday, Nov. 27/18
  5. FA - Impulse-Momentum Problem -Deadline: Monday, Nov. 26/18
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Physics 112

Topics: U2-S3 - Momentum, Impulse and Impulse-Momentum Theorem

1. momentum

$\rightarrow$  vector  
 $\rightarrow \vec{p}, \text{ kg}\frac{\text{m}}{\text{s}}$   
 $\rightarrow \vec{p} = m\vec{v}$

\* velocity is constant

kg  $\rightarrow$  g

$\vec{p}, \vec{v}$  have the same dir.

$\vec{p} = ?$   
if double  $\vec{v}$   
 $2\vec{p} = m(2\vec{v})$

2. change in momentum

$\rightarrow$  vector  
 $\rightarrow \Delta\vec{p}, \text{ kg}\frac{\text{m}}{\text{s}}$   
 $\rightarrow \Delta\vec{p} = m\Delta\vec{v} = m(\vec{v}_f - \vec{v}_i)$

3. impulse

$\rightarrow$  vector quantity  
 $\rightarrow \vec{J}, \text{ N}\cdot\text{s} = \text{kg}\frac{\text{m}}{\text{s}}$   
 $\rightarrow \vec{J} = \vec{F}t$

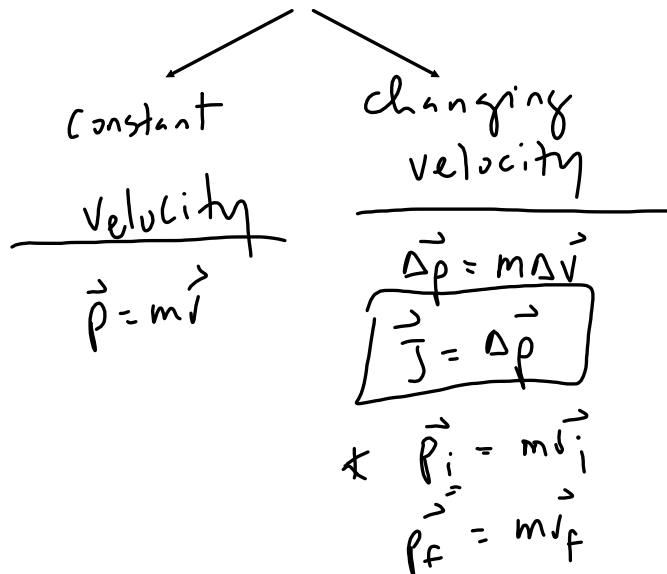
ave. force.

$1\text{ms} = 10^{-3}\text{s}$   
 $1\text{ms} \rightarrow \text{s}$   
 $1\text{N} = 10\text{N}$

4. impulse-momentum theorem

$\rightarrow \vec{J} = \Delta\vec{p}$   
 $\rightarrow \vec{F}t = m\vec{v}_f - m\vec{v}_i$

Problems



## Physics 122

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1. **Experiment 8.1 - Kepler's Laws - Page 49 - Submit for Marks**  
**- Due - Tuesday, November 20/18**

2. FA - Kepler's Third Law - Deadline: Nov. 22/18

3. Questions?

Worksheet - Universal Law of Gravitation  
C12 -> Page 580, PP#1-7

Worksheet - Planetary Motion

4. SA - U2: S1&2 (Circular and Planetary Motion)  
**- Date: Wednesday, Nov. 28/18**

- Format: MC

5 Problems - Uniform Circular Motion

- Unbanked/Banked Curves

- Kepler's Third Law

- Law of Universal Gravitation

- Planetary Motion (g, v, T)

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## Science 10

Thursday, November 22/18

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1. Science Articles - Complete 8 by the end of the semester.
2. Questions?  
Worksheets - Rearranging Equations
3. FA - Rearranging Equations
4. Metric Conversions
5. Worksheets - Metric Conversions
6. FA - Metric Conversions
7. Topics -> SA - Physics #1 (Physics to Metric Conversions)
8. Review -> SA - Physics #1
9. **SA - Physics #1: Thursday, Nov. 29/18**

## Topics: SA - Physics #1

1. definitions: physics, linear motion, physical quantity, significant digits, certainty, exact value, defined value, rounding digit, defining equation
2. SI System - International System of Units
  - know the SI base units for length, time and mass
  - be able to identify a derived unit
3. certainty - identify certain and uncertain digits in a measurement
  - determine the certainty of a measurement by stating its number of significant digits
4. scientific notation
5. rounding measurements
6. SDs and operation rules - Certainty Rule
  - > multiplication and division
  - > total # of significant digits
  - Precision Rule
    - > addition and subtraction
    - > # of digits after the decimal
7. rearrange an equation for a specified variable
8. perform metric conversions using conversion factors