Science 10
Monday, April 10/17

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1. Check -> Worksheet - Certainty and Precision Rules
2. Assignment -> Digits, Rounding and Rules
   -> Topics
   -> Period 1 - Thursday
   Period 4 - Wednesday
3. Defining Equations
4. Rearranging Equations - To Be Continued
5. Worksheet - Rearranging Equations
6. Metric Conversions
7. Worksheet - Metric Conversions

Assignment

1. Digits:

#certain digits (✓)
uncertainty digits (?)
significant digits

751.0 m

cd = (✓) = 3
ud = (?) = 1
SD = 4

1.2060 × 10^{3} kg

cd = 4
ud = 1
SDs = 5

0.00010 mg

cd = 1
ud = 1
SD = 2

2. Rounding:

Round to 4SDs. 127.436 g → 127.4 g

Round to 5SDs. 127.436 g → 127.44 g

Certainty Rule (× or ÷)

0.03722 cm × 6.5 cm = 0.24193 cm^2 → 0.21 cm^2

3SD, 2SD, 2SD

Precision Rule (+ or −)

4.3775 g + 14.62 g + 327.9 g = 346.8775 g → 346.9 g

3, 2, (1)

Physics 112

Monday, April 10/17

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1. Return Midterm Marks
2. Return FA from Last Week
3. Check -> Worksheets re 2nd Law Problems
4. Worksheets - First and Second Law Problems
5. Newton's Third Law of Motion - Tomorrow
6. SA - U2 S2 - Topics
   - Thursday MC Prob.
7. U2 S3 - Introduction to Momentum
8. Momentum
9. Worksheet - Momentum
10. Impulse
11. Impulse - Momentum Theorem

Formative Assessment - Force Problem

A student on planet Luvfizics presses a 1.7 kg textbook against a vertical wall. The student applies a force of 51 N in order to prevent the textbook from sliding down the wall. What is the acceleration due to gravity on LuvFizics? Include a labelled FBD for the textbook.

Note:

Surfaces	μ_s	μ_k
textbook and wall	0.284	0.196

↳ rest → 1st Law.

Sketch

$m = 1.7\text{ kg}$

$F_A = 51\text{ N}$

$\mu = 0.284$

$\vec{g} = ?$

FBD

$\vec{N}$, $\vec{F_f}$, $\vec{F_A}$, $\vec{W}$

$N = F_A$, $F_f = W$

$F_f = \mu N$, $W = mg$

$W = mg$

$F_f = mg$

$\mu N = mg$

$\mu F_A = mg$

$g = \frac{\mu F_A}{m}$

$g = 8.5\text{ m/s}^2$

$\vec{g} = -8.5\text{ m/s}^2$

$\vec{g} = 8.5\text{ m/s}^2$, down

$W \rightarrow$ 8.5 m/s², down.

$W = mg$.

$F_A - \mu mg = ma$

$F_A = \mu mg + ma$

$F_A = m(\mu g + a)$

$\frac{F_A}{\mu g + a} = m$

Physics 122

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1. Return -> Midterm Marks
2. Check -> Worksheets - 2D Collisions
3. SA - U1S4 - 2D Collisions
   - Thursday 2 Probl. → [1 collisim, 1 explosim]

4. U2 S1 - Circular Motion
5. Uniform Circular Motion
6. Centripetal Acceleration
7. Centripetal Force
8. Formulas
9. Worksheet - Circular Motion
10. Unbanked and Banked Curves
11. Worksheet - Unbanked and Banked Curves