

4e Coversheets, 2009

Chapter 1: Introduction and the Scientific Method

1. Getting to Know Your Conceptual Physics Textbook
2. Lab: "Amassing a Penny's Worth"
3. Graph from lab

Chapters 2: Equilibrium of Forces

1. Worksheet 2-1
2. Worksheet 2-2
3. Chapter 2 Think and Explains #31-41 (answered in complete sentences)
4. Chapter 2 Think and Solves #42-48 (4-step method)
5. Lab: "Smart Ropes" (with double graph)
6. Lab: "24-Hour Towing Service"
7. Force as a Vector (vector diagrams neatly done on graph paper)
8. Chapter 2 Reading/Class Notes

Please utilize the four-step procedure for all Think and Solves.

Four Step Method:

- 1) Make and sketch and label the givens
- 2) Identify what you are solving for ($d = \text{---?---}$, $v = \text{---?---}$, $a = \text{---?---}$ etc.)
- 3) Write down the relevant equations.
- 4) Solve the equation(s) then either box your answer or highlight your answer.

Chapter 3: Inertia

1. Lab: "Going Nuts"
2. Worksheet 3-1
3. Chapter 3: "Think and Explains" (in complete sentences) #28-42
4. Chapter 3: "Think and Explains" (in complete sentences) #43-55
5. Chapter 3: "Think and Solves" (4-step method)
6. Inertia Demonstrations—"Mass vs. Weight"
7. Chapter 3 Reading Class/Notes

Chapter 4: Linear Motion

1. Lab#3 "The Domino Effect" + graph(s) of data (hand drawn graph)
2. Worksheet 4-1
3. Worksheet "Non Accelerated Motion" (golden rod)
4. Worksheet 4-2
5. "Reaction Time" Activity
6. Chapter 4: Reading/Class Notes

Chapter 5: Projectile Motion—Part I

Chapter 5A: Projectile Motion

1. Worksheet 5-1
2. Worksheet 5-2
3. Bull's Eye Lab
4. Think and Explains #22-32
5. Think and Explains #33-44
6. Think and Solves #45-50
7. Practice Problems, page 847 #1-7 (4-step method)
8. Apollo 13 Study Guide
9. Reading/Class Notes

Chapter 5B: Physics of Baseball

1. Class Notes on Physics of Pitching, etc.
2. Lab: "What a Drag" with graph
3. Worksheet "Anatomy of a Homer at 42°"

Chapter 6: Newton's 2nd Law

1. Worksheet 6-1
2. Worksheet 6-2
3. Chapter 6: Think and Explains #55-67
4. Lab #19 or #20 with signed graph
5. Top Gun Problems (4-step method including FBD)
6. Chapter 6 Reading/Class Notes

Chapters 8 and 9: Impulse, Momentum, Work and Energy

1. Lab#23 "Egg Toss"
2. Worksheet 7-2
3. Worksheet 9-1
4. Worksheet 9-2
5. Worksheet 9-3
6. Worksheet 13-3
7. Lab#26 "Making the Grade"
8. The Sling-Shot Effect—Escaping the Gravitation of the Sun/Launch Speed of a Popper
9. Chapter 8 Reading/Class Notes
10. Chapter 9 Reading/Class Notes

Chapter 10: Circular Motion

1. Muscle Up
2. Chapter 10-1
3. Worksheet 10-2a
4. Worksheet 10-2b
5. Flying Pig
6. Chapter 10 #37-47
7. Chapter 10 Reading/Class Notes

Chapter 11: Torque and Rotational Mechanics

1. Chapter 11#1-12
2. Worksheet 11-2
3. Worksheet 11-3
4. Lab: "Torque Feeler"
5. Lab: "Weighing an Elephant"
6. Lab: "Solitary See-Saw"
7. Lab: "Keeping in Balance"
8. Chapter 11#13-51
9. Chapter 11 Page 864#1-10
10. Reading/Class Notes
11. full-page drawing of 11-3 mobile
12. Lever and CG Practive Problems