

# Introductory Physics

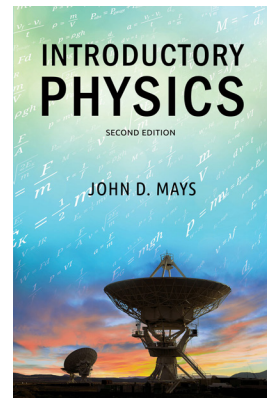
## Errata

We always strive to make our textbooks as accurate as possible, but sadly, errors are a reality. We very much appreciate friends who report errata that are not included in this document!

Please send new errata to [info@novaescienceandmath.com](mailto:info@novaescienceandmath.com)

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## Introductory Physics, 2nd edition (2016)

### Chapter 2

#### Exercises

7. Answer should have five significant digits, not 4. Answers: 983,560,000 ft/s and  $9.8356 \times 10^8$  ft/s.

### Chapter 6 Text

p. 140, example problem - the dimensions of the block should be 4.0 in x 2.5 in x 9.0 in.

#### Volume, Mass, and Weight Exercises

10. The stem in the answer should be 3.600.  
20. 21,780 m<sup>3</sup>

#### Density Exercises

11. 25,000,000 lb

#### Weekly Review Guide

WRG 9, Question 4 is a momentum problem, which has not been covered yet. Below is a replacement problem.

*A truck traveling at 55 mph hits the brakes and slows to 27 mph in 3.55 s. Determine the acceleration of the truck.*

*Answer:  $-3.8 \text{ m/s}^2$*

WRG 15, Question 1

$$m_1 = 6.696 \times 10^{-27} \text{ kg}$$

$$m_2 = 3.348 \times 10^{-25} \text{ kg}$$

$$v_{1i} = 1.500 \times 10^7 \frac{\text{m}}{\text{s}}$$

$$v_{1f} = 1.441 \times 10^7 \frac{\text{m}}{\text{s}}$$

$$p_{1i} = -p_{1f} + p_{2f}$$

$$p_{2f} = p_{1i} + p_{1f} = m_1 v_{1i} + m_1 v_{1f} = m_1 (v_{1i} + v_{1f})$$

$$p_{2f} = 6.696 \times 10^{-27} \text{ kg} \left( 1.500 \times 10^7 \frac{\text{m}}{\text{s}} + 1.441 \times 10^7 \frac{\text{m}}{\text{s}} \right) = 1.9693 \times 10^{-19} \text{ kg} \cdot \frac{\text{m}}{\text{s}}$$

$$p_{2f} = m_2 v_{2f}$$

$$v_{2f} = \frac{p_{2f}}{m_2} = \frac{1.9693 \times 10^{-19} \text{ kg} \cdot \frac{\text{m}}{\text{s}}}{3.348 \times 10^{-25} \text{ kg}} = 588,200 \frac{\text{m}}{\text{s}}$$

## ***Solutions Manual to Accompany Introductory Physics, 2nd edition (2016)***

### **Chapter 6**

11. Answer is correct. But in the solution, the mass should be rounded to  $1.14 \times 10^7$ , not  $1.13 \times 10^7$ . Similarly, the weight should be rounded to  $1.12 \times 10^8$  not  $1.11 \times 10^8$ .

## ***Introductory Physics, 1st edition (2013)***

### **Chapter III Exercises**

7.  $1.64 \text{ m/s}^2$

### **Chapter VI Text**

p. 126 Example problem - the dimensions of the block should be 4.0 in x 2.5 in x 9.0 in.

### **Volume Mass and Weight Exercises**

7. Correct significant digits make the answer  $1.0 \times 10^5 \text{ lb}$ .

### **Density Exercises**

11. Correct significant digits make the answer 25,000,000 lb.

### **Chapter VIII Exercises**

#### **Pressure Problems**

12.  $36,000 \text{ Pa}$ ,  $5.2 \text{ psi}$   
13.  $5,200,000 \text{ Pa}$ ,  $750 \text{ psi}$

## Buoyancy Problems

3.  $1.90 \times 10^3 \text{ N}$

## Chapter IX Text

Figure 9-4: The direction of rotation for the floating object shown in the figure should be clockwise.

## Chapter XI Exercises

### Multi Resistor Circuit Calculations III

2.  $I = 0.9071 \text{ mA}, P = 0.4526 \text{ mW}$

4.  $V = 2.8001, I = 3.0770 \mu\text{A}, P = 8.6159 \mu\text{W}$

## ***Weekly Review Guides***

WRG 12, Question 4.  $p = 2.07 \times 10^{-20} \text{ kg}\cdot\text{m/s}$