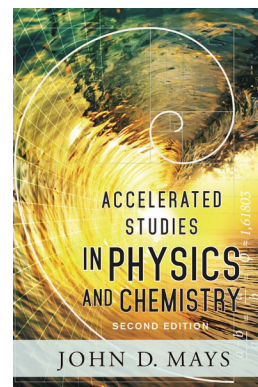


Chemistry for Accelerated Students

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



Last revised: February 13, 2019

ASPC (Accelerated Studies in Physics and Chemistry) 2nd edition

Chapter 5

Energy Questions, Set 3

Exercise 3 should read: Imagine a new frictionless roller coaster that uses magnetic levitation so that the cars float above the rails without actually touching them. Imagine also that the aerodynamic design of the cars is so brilliant that there is essentially no air friction. The car has a mass of 5,122 kg. From the top of a 25.0 m-hill, the car rolls down a valley where the lowest point is 2.50 m above the ground, and then back up to the top of a lower hill, 18.0 m above the ground. Assuming the roller coaster begins at rest at the top of the first hill, determine how fast it is traveling when it reaches

- a. the bottom of the valley.
- b. the top of the second hill.

Answers:

- 1f. 111 J
- 1g. 4.26 m/s
- 1h. 5.71 m/s
- 3a. 21.0 m/s
- 3b. 11.7 m/s

Chapter 11

Density Exercises

17. 661,000 gal

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Chapter V Energy Questions, Set 2

- 1a. 727 kg. (This value has the correct number of significant digits. There is no extra digit here.)

Chapter VII Content

- p. 121, Figure 7-4: The direction of rotation for the floating object shown in the figure should be clockwise.

Chapter VII Exercises

16. $\lambda/D = 3.9$, or $\lambda/D = 4$ (one sig. dig.)

Chapter XI Content

- p. 248 The correct solution to Example 11.3 is as follows:

$$\rho = 8.96 \frac{\text{g}}{\text{cm}^3}$$

$$d = 1.5 \text{ cm}$$

$$l = 2.5 \text{ cm}$$

$$r = \frac{d}{2} = \frac{1.5 \text{ cm}}{2} = 0.75 \text{ cm}$$

$$V = \pi r^2 \cdot l = 3.14 \cdot (0.75 \text{ cm})^2 \cdot 2.5 \text{ cm} = 1.77 \text{ cm}^3$$

$$\rho = \frac{m}{V}$$

$$m = \rho V = 8.96 \frac{\text{g}}{\text{cm}^3} \cdot 1.77 \text{ cm}^3 = 15.9 \text{ g}$$

$$m = 16 \text{ g}$$

- p. 263 The last major sentence in the second paragraph should read: "Any atom in the third column from the left, which could mean it is in either Group 13 or Group 3, will have three electrons in its valence shell."
- p. 291 At the end of Section 14.2.2, in the text and in the caption to Figure 14.4, references to copper carbonate and copper oxide are represented as CuCO_3 and CuO (not CaCO_3 and CaO or CO)

Chapter XI Exercises

13. 25,000,000 lb

16. 13,000 lb

Chapter XIII Exercises

Number of Atoms Represented by a Chemical Formula: The entry for item 3 in the table should read $(\text{NH}_4)_3\text{PO}_4$

Weekly Review Guide #10

Answer to #4 is 47 J in answer section of the document. It should be 1276 J or 1300 J with 2 sig. dig.

Sample Answers to Verbal Questions

Ch 12, PTE Atomic Data Exercises should be

$$285 - 112 = 173 \text{ neutrons}$$

Quizzes

Quiz 7, problem 3. The correct answer is $1.23 \times 10^{-23} \text{ N}$

Quiz 15

3a. The time should be converted to seconds: $3,410,000 \text{ m/s}^2$

3b. The correct answer is $5.71 \times 10^{-21} \text{ N}$.