

Homework 5

Due: Friday, October 30

Complete the following problems from your textbook at the end of Chapter 16.

1. P25

Answers:

(a) 7.5×10^{19}

(b)

(c) $3.15 \times 10^{-5} \text{ m/s}$

2. P31

Answers:

(a) $5.14 \times 10^{-6} \text{ T}$

3. P37

4. P42

Answers:

(a) $|\vec{B}| = 5.03 \times 10^{-3} \text{ T}$

5. P43

Answers:

(a) 1.5 A

6. P45

Answers:

(a) $|\vec{B}| = \frac{\mu_0}{4\pi} \pi I \left(\frac{1}{R_1} + \frac{1}{R_2} \right)$

7. P51

Answers:

(a) $|\vec{B}| = \frac{\mu_0}{4\pi} \pi I \left(\frac{1}{R} + \frac{3}{r} \right)$