

Chapter 9

Review Questions: 12, 28, 29

Exercises: 4, 17, 35, 40, 49

Problems: 1, 2, 3, 7

Additional:

- A. Describe three different situations that cause an object to be magnetic.
- B. State Faraday's law in your own words and apply this law to generators.
- C. Explain how both Faraday's law and Maxwell's law apply to transformers.
- D. Calculate the amount of magnetic force for each situation.
 - a. 2 Coulombs of charge have a velocity of 50 m/s perpendicular to a 100 Tesla magnetic field
 - b. 200 Coulombs of charge have a velocity of 500 m/s perpendicular to a 1000 Tesla magnetic field
 - c. 2 Coulombs of charge have a velocity of 50 m/s parallel to a 100 Tesla magnetic field
 - d. 200 Coulombs of charge have a velocity of 500 m/s parallel to a 1000 Tesla magnetic field
 - e. 2 Coulombs of charge have only 75% of a 50 m/s velocity perpendicular to a 100 Tesla magnetic field
 - f. 200 Coulombs of charge have only 75% of a 500 m/s velocity perpendicular to a 1000 Tesla magnetic field
 - g. What factors result in the greatest amount of magnetic force on a moving charge?