Chapter 36 Bookwork

Section 36.1

1. How are magnets similar to electric charges?
2. What happens when a north pole of one magnet is brought near the north pole of another magnet?
3. How are magnets different from electrical charges?
4. Does every magnet necessarily have a north and a south pole?

Section 36.2

5. What is a magnetic field?
6. What reveals the shape of the magnetic field?
7. What is the direction of the field outside the magnet?

Section 36.3

8. What type of field does a stationary electric charge have?
9. What fields does a moving electric charge have?
10. In terms of electrons, why are some materials magnetic and others are not?

Section 36.4

11. What are clusters of aligned atoms called?
12. What is the difference between a piece of ordinary iron and an iron magnet?
13. The iron filings sprinkled on the paper that covers the magnet in figure 36.4 were not initially magnetized. Why, then, do they line up with the magnetic field of the magnet?

Section 36.5

14. A moving charge produces a _____. Many charges in motion -- _____- also produce a _____.
15. What is an electromagnet?
16. How can you increase the strength of an electromagnet?
17. Give 2 examples of uses of electromagnets.