

Magnets and Magnetism

Choose the letter of the best answer.

1. Which of the following best describes a magnetic field?
 - A. a measure of the length of a magnet
 - B. the force that pushes two magnets away from each other
 - C. an invisible region that surrounds the north pole of a magnet
 - D. a region around a magnet in which you can measure magnetic forces

2. Sometimes the north and south poles of atoms in a material will line up. What is the term for the region where this occurs?
 - A. a domain
 - B. ferromagnetic
 - C. magnetic field
 - D. magnetic pole

3. Amanda is holding a compass and notices that the north pole of the compass points towards the north pole of Earth. She is confused because she knows from her science classes that the north poles of two magnets will repel each other. How can she explain this phenomenon?
 - A. The geographic north pole of Earth is actually near Earth's magnetic south pole.
 - B. The north pole of the compass was probably pushed in the wrong direction by a nearby magnet.
 - C. Earth's magnetic poles may have reversed positions while Amanda was observing the compass.
 - D. Earth's poles are not strong enough to attract any handheld magnets, so it was probably a coincidence that the compass pointed towards the north pole.

4. Examine the properties of the three magnets in the chart below:

Magnet A	Magnet B	Magnet C
made of alnico	made of soft iron	made of aluminum
is not easily magnetized, but retains its magnetic properties for a long time	is magnetized easily by an electric current	is not magnetized
has a north and south pole	has a north and south pole	does not have a north or south pole

Which of these magnets is most likely a permanent magnet?

- A. Magnet A
 - B. Magnet B
 - C. Magnet C
 - D. Magnets A, B, and C
5. Which of the following determines whether or not a material is magnetic?
 - A. the density of the material
 - B. the weight of the material on Earth
 - C. the alignment of atoms in the material
 - D. the number of elements that make up the material