1. What happens when the North pole of one bar magnet is brought near the South pole of another in the rolling-magnet setup?
A. The magnets ignore each other
B. The free magnet moves toward the approaching magnet
C. The free magnet moves away from the approaching magnet
D. The free magnet stops rotating but does not move (B)
Explanation : Unlike poles (N–S) attract, so the freely placed magnet moves toward the approaching pole.

2. In the same setup, what happens when the North pole of one magnet is brought near the North pole of the other?
A. The free magnet moves toward the approaching magnet
B. The free magnet moves away from the approaching magnet
C. The free magnet breaks into pieces
D. There is no movement at all (B)
Explanation : Like poles (N–N) repel, pushing the freely placed magnet away.

3. Replacing one of the magnets with an iron bar leads to which observation?
A. Only one end of the iron bar is attracted to the magnet
B. The iron bar repels one pole and attracts the other
C. Both ends of the iron bar are attracted to both poles of the magnet
D. The iron bar shows no reaction (C)
Explanation : Magnetic materials like iron are attracted by both poles, unlike a magnet which can repel.

4. Which statement correctly distinguishes attraction and repulsion?
A. Both attraction and repulsion happen with magnets and magnetic materials
B. Only attraction happens with magnets; repulsion never occurs
C. Attraction happens with magnets and magnetic materials, but repulsion occurs only between two magnets
D. Repulsion happens with magnets and magnetic materials; attraction never occurs (C)
Explanation : An ordinary iron bar does not reliably align north–south; this helps distinguish magnets from non-magnets.

5. What is the sure test for identifying whether an object is a magnet?
A. It feels heavier near another magnet
B. It shows repulsion with a known magnet
C. It attracts iron filings
D. It sticks to a refrigerator door (B)
Explanation : Repulsion is a definitive test; attraction alone could be due to the object being merely magnetic material.

6. In the compass experiment, bringing the North pole of a bar magnet near the North end of the compass needle causes the needle to:
A. Move closer
B. Move away
C. Stay fixed without deflection
D. Flip upside down (B)
Explanation : Like poles repel, so the compass needle's North end moves away from the approaching North pole.

7. Bringing the South pole of a bar magnet near the North end of the compass needle causes the needle to:
A. Move closer
B. Move away
C. Remain stationary
D. Rotate continuously without settling (A)
Explanation : Unlike poles attract, so the needle's North end is pulled closer to the South pole of the magnet.

8. Which step ensures the free magnet can respond clearly during the rolling-magnet activity?
A. Heat the magnets before starting
B. Place the test magnet horizontally on 5–6 round pencils so it can roll freely
C. Immerse the magnet in water
D. Tie the magnet with a string (B)
Explanation : Resting the magnet on round pencils lets it roll freely to show attraction or repulsion.

9. Which pair correctly matches pole interaction with observed effect?
A. N near S → moves away
B. S near S → moves toward
C. N near N → moves away
D. S near N → no effect (C)
Explanation : Like poles (N–N or S–S) repel; the free magnet moves away when like poles face each other.

10. Which conclusion from the activities best explains why an iron bar cannot reveal repulsion?
A. Iron bars are non-magnetic
B. Iron is attracted by both poles and does not repel, so only a true magnet can show repulsion
C. Iron becomes hot near magnets and loses magnetism
D. Iron has only one pole (B)
Explanation : Since iron (a magnetic material) is drawn to both poles, it won't exhibit repulsion; repulsion confirms the presence of a magnet.