1. Which of these describes magnetic force?

Tick the correct answer.

✓	It can act over a distance.
	It can be seen.
	It is the strongest at the centre of a magnet.

2. What does this diagram show?

Circle the correct answer.

magnetic force is strongest at the poles of a magnet

magnetic force repels magnetic objects

magnets have different strengths

3. Nur and Leena draw diagrams to show how a bar magnet interacts with iron filings.

Nur's diagram

Leena's diagram

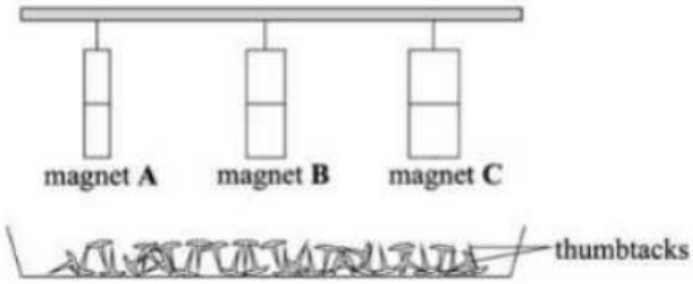
Whose diagram is correct? Explain your answer.

Nur's diagram is correct. The poles are the strongest parts of the magnet.

4. Tia is investigating if magnetic strength depends on the size of a magnet.

She uses three magnets of different sizes. The diagram shows her set-up.

The three magnets are hung from a string above a tray of thumbtacks.



a. What are the independent and dependent variables in Tia's investigation?

Independent variable: The size of the magnet

Dependent variable: The number of thumbtacks attracted to magnets.

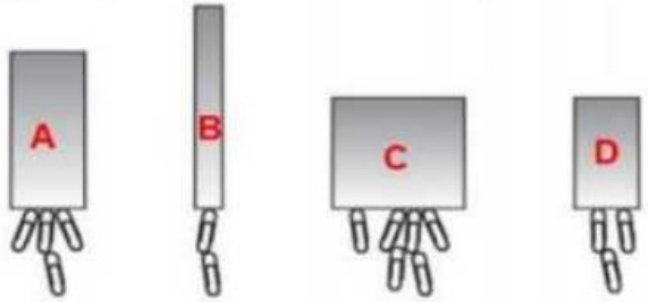
b. What should Tia do to make sure that her investigation is a fair test?

Keep all the variables the same except for one, in this experiment, it is the size of the magnet.

5. Magnets come in all shapes, sizes and strengths.

John is using a pile of steel paper clips to test the strength of different magnets.

All paper clips are the same size and shape.



a. Fill in the table with the number of paper clips each magnet can hold.

magnet	number of paper clips
A	4
B	2
C	6
D	3

b. Which magnet is the strongest? Give a reason for your answer.

Magnet C. It attracted the most paper clips .

c. What property of steel allows the paper clip to be lifted by the magnet?

It is a magnetic material.

d. John tries to pick up a plastic clip with the magnet, what does he notice?

It is not attracted.

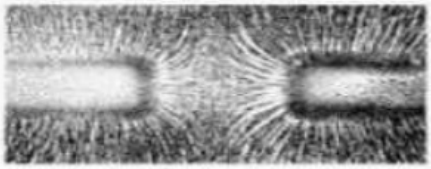
e. He puts one of his magnets near a piece of metal. As the magnet gets nearer, the piece of metal **moves away**. What is special about this piece of metal?

It is a magnet.

f. He now puts one of his magnets near another piece of metal but it is not attracted. Why isn't it attracted? It is a non-magnetic material.

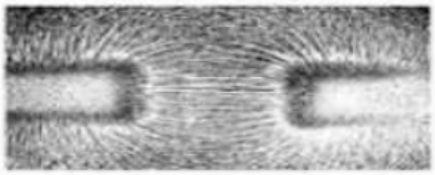
6. Peter places a sheet of glass over two magnets.

a. The diagram shows what happens when he shakes some iron filings on it.



What does this tell you about the poles of the magnets, are the poles attracting each other or repelling each other? repelling

b. Peter moves/repositions one of the magnets. The diagram shows his new results.



What does this tell you about the poles of the magnets, are they attracting each other or repelling each other? attracting