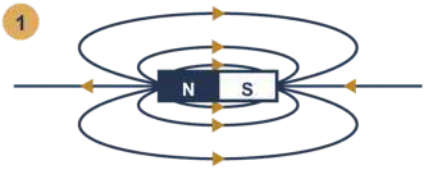
Magnetic Field Lines

Is the field drawn correctly?

tick one for each diagram

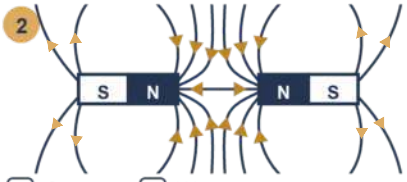
- Field lines go from **N to S**
- They **never cross**
- They come **out of N** poles and go **into S** poles

1



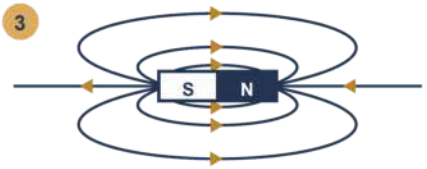
☐ Correct ☐ Wrong

2



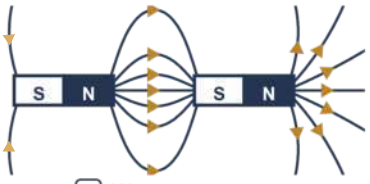
☐ Correct ☐ Wrong

3



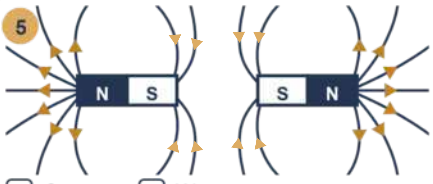
☐ Correct ☐ Wrong

4



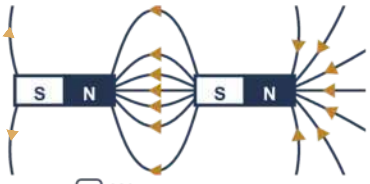
☐ Correct ☐ Wrong

5



☐ Correct ☐ Wrong

6



☐ Correct ☐ Wrong

Practical — plot the field around a bar magnet

6.6

Draw round your own bar magnet, then plot its field

Label N and S. Use a plotting compass to plot at least 4 field lines.

Method — list the steps

How do you plot one field line?

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

Words to use: ☐ plotting compass ☐ pencil dot ☐ tip of the needle ☐ move the compass ☐ repeat ☐ join the dots ☐ arrow N → S

Exam-style question

A student wants to find the shape of the magnetic field between the north pole of one bar magnet and the south pole of another.

(a) Describe how the student could use a plotting compass to plot the field lines. **[3]**

(b) State how the student should show the direction of the field on each line. **[1]**

(c) Describe another method the student could use to show the shape of the field. **[2]**

(Total for question = 6 marks)

ANSWER