Test: Primary 4 Science (Term 1) - Pei Hwa

Points: 15 points

Name: _____ **Score:** _____

Date: _____

Signature: _____

Select multiple choice answers with a cross or tick:

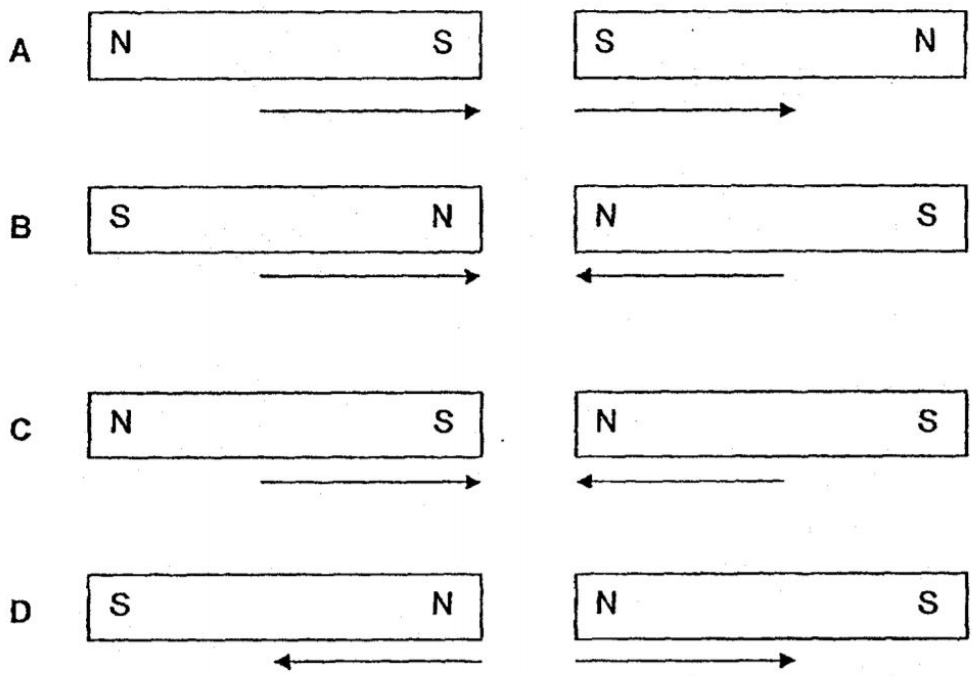
- ○ Only select one answer
- ☐ Can select multiple answers

Question 1 of 16

Primary 4 Science (Term 1) 2 pts

For each question from 1 to 6, four options are given. One of them is the correct answer. Make your choice and choose your correct answer.

Two bar magnets were brought close to each other.

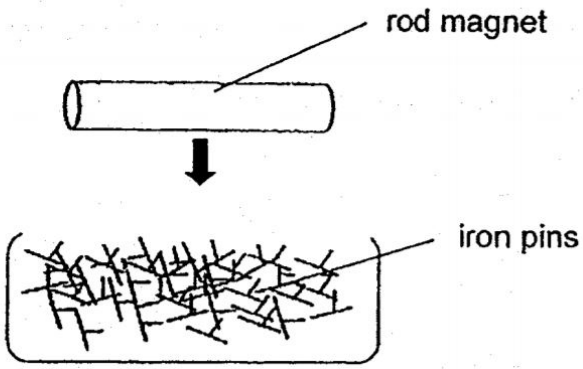


Which two of the diagrams (A, B, C and D) correctly show how the two bar magnets will interact when they are brought near each other?

- **A)** A and B
- **B)** A and C
- **C)** B and D
- **D)** C and D

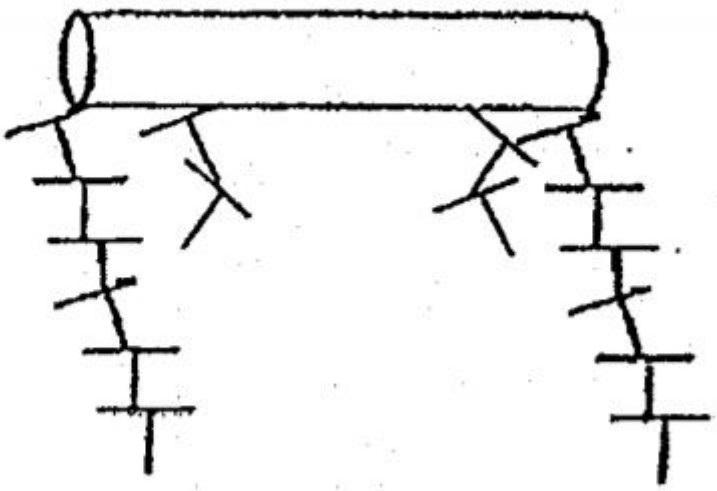
Question 2 of 16 Primary 4 Science (Term 1) 2 pts

Ben lowered a rod magnet into a box of iron pins as shown below.

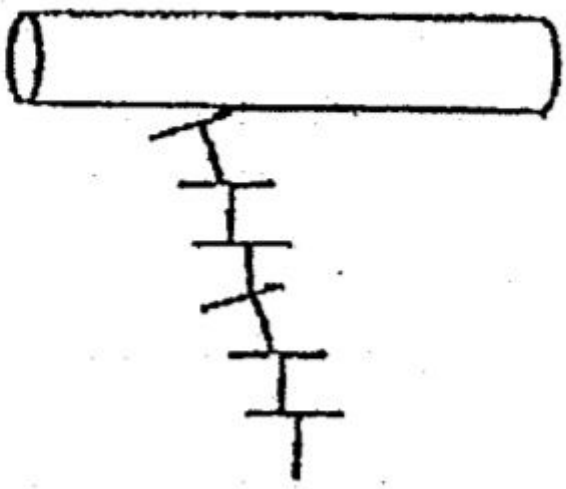


What would Ben likely to observe when he pulled the rod magnet out from the box of pins?

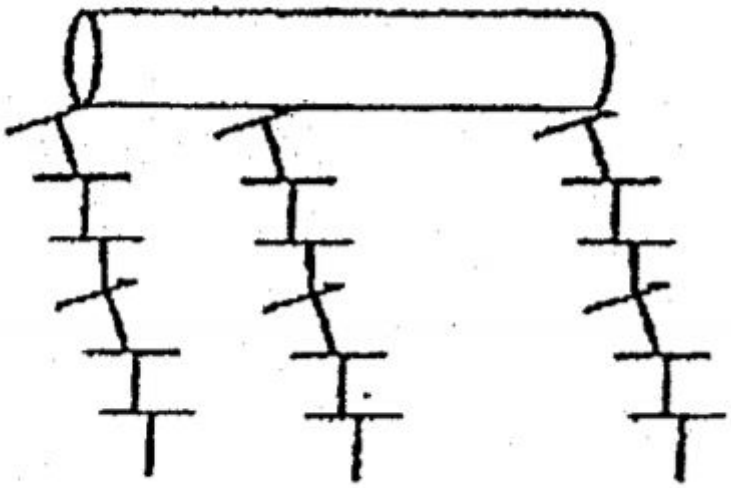
A)



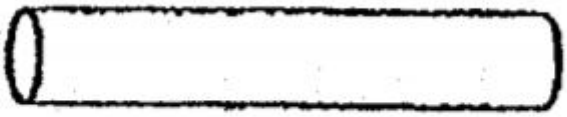
B)



C)



D)



Question 3 of 16

Primary 4 Science (Term 1) 2 pts

Four pupils used the following methods to test if a metal bar is a magnet.

Alice: Bring the bar to one end of a magnet and if the magnet attracts it, then it is a magnet.

Ben: Bring the bar to one end of a magnet and if the magnet repels it, then it is a magnet.

Cara: Suspend the bar with a string and if it rests in the East-West direction, then it is a magnet.

Dina: Suspend the bar with a string and if it rests in the North-South direction, then it is a magnet.

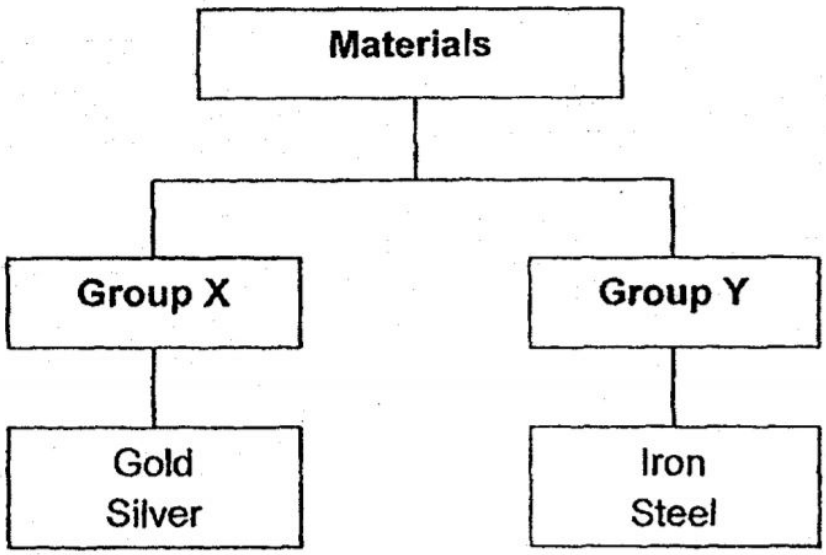
Which tests will help to identify if the metal bar is a magnet?

- **A)** Alice and Cara only
- **B)** Ben and Dina only
- **C)** Alice, Ben and Dina only
- **D)** Alice, Ben, Cara and Dina

Question 4 of 16

Primary 4 Science (Term 1) 2 pts

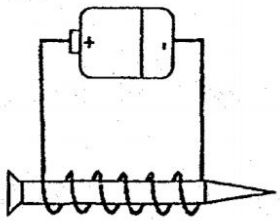
Study the classification table below.



Which of the following materials will you place in Group Y?

- **A)** Nickel
- **B)** Copper
- **C)** Ceramic
- **D)** Aluminium

Cara set up the following experiment to make an electromagnet using a battery and a wire coiled around an iron nail.



She increased the number of coils around the iron nail and counted the number of paper clips that were attracted to it. Then, she recorded the results in a table.

Which of the following table was Cara likely to get if she had successfully carried out the experiment?

A)

Number of coils	10	20	30	40
Number of paper clips	5	5	5	5

B)

Number of coils	10	20	30	40
Number of paper clips	18	16	14	10

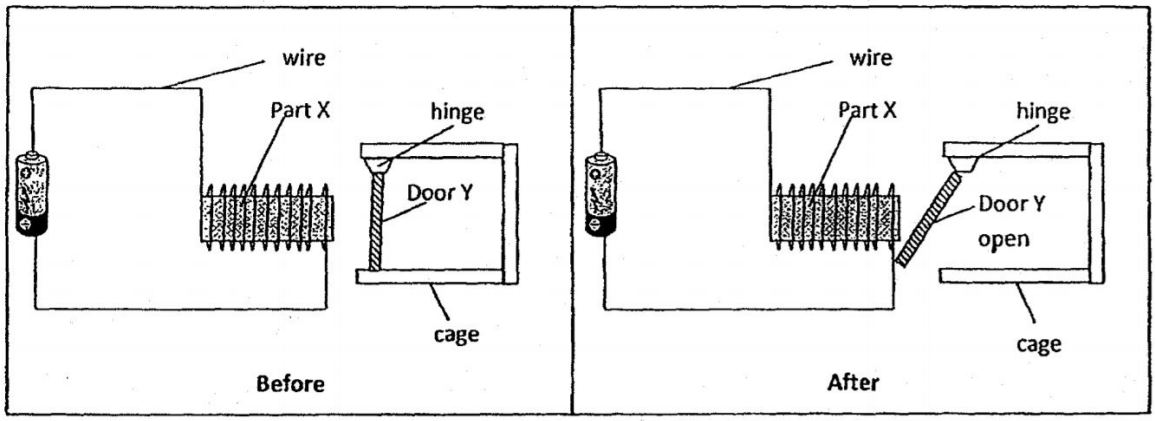
C)

Number of coils	10	20	30	40
Number of paper clips	8	12	18	19

D)

Number of coils	10	20	30	40
Number of paper clips	5	0	0	0

Mr Tan makes the door of a cage using an electromagnet as shown in the diagram below. When electricity is passed through the wire around Part X, Door Y is attracted by Part X and swings open. When the electricity is removed, Door Y closes.



Which of the following shows the correct materials used to make Part X and Door Y?

A) **Part X** - Iron
Door Y - Wood

B) **Part X** - Wood
Door Y - Iron

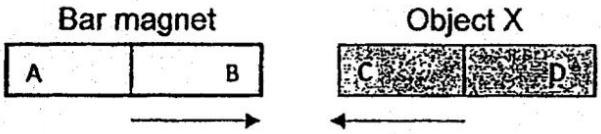
C) **Part X** - Wood
Door Y - Wood

D) **Part X** - Iron
Door Y - Iron

Question 7 of 16

Primary 4 Science (Term 1) 0 pts

A bar magnet and Object X are placed near each other. Letters A, B, C and D represent the poles of the magnet and Object X. The arrows show the direction of the magnetic force from both the bar magnet and Object X.



Ali says that the observation above does not show that Object X is definitely a magnet. Do you agree with Ali? Explain your answer.

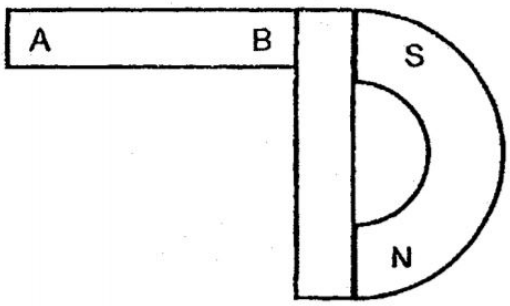
This question is designed for extended answers that parent/ teacher will have to assign and guide child to attempt after the test has been completed.

Grading: This question type is not graded on this system and will not affect the final score as it was designed in such a way that it requires manual assistance.

Question 8 of 16

Primary 4 Science (Term 1) 1 pt

The bar magnet is then arranged with one other identical bar magnet and a U-shaped magnet as shown in the diagram below.



What are the poles at A and B?
Match the options below:

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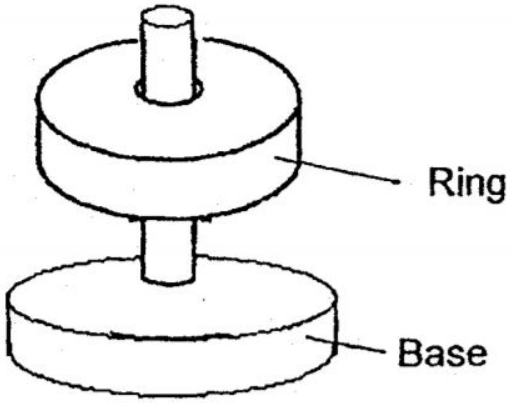
1. [ ]	A:	A.	N
2. [ ]	B:	B.	S

Alice slots a ring through the pole Object P.



Object P

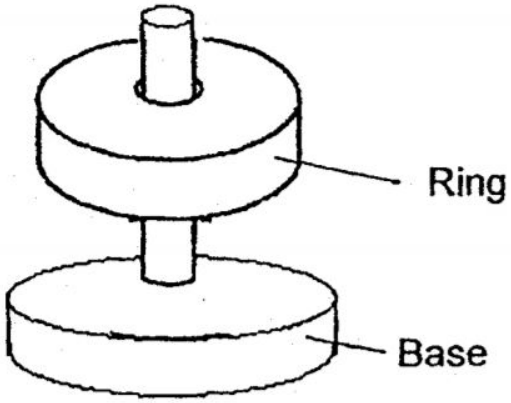
She observes that the ring floats above the base of Object P.

Study the statement below and choose the correct answer.

The ring is a magnet.

- **A)** True
- **B)** False

Alice slots a ring through the pole Object P.



Object P

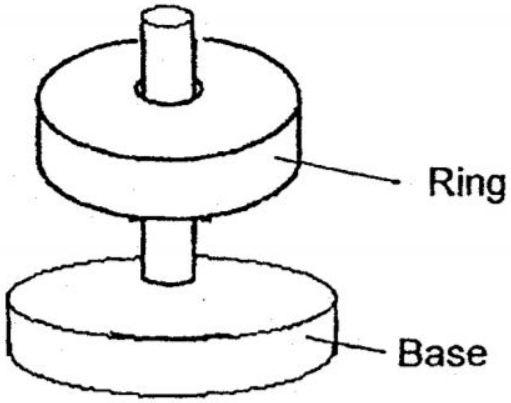
She observes that the ring floats above the base of Object P.

Study the statement below and choose the correct answer.

The base is not a magnet.

- **A)** True
- **B)** False

Alice slots a ring through the pole Object P.



Object P

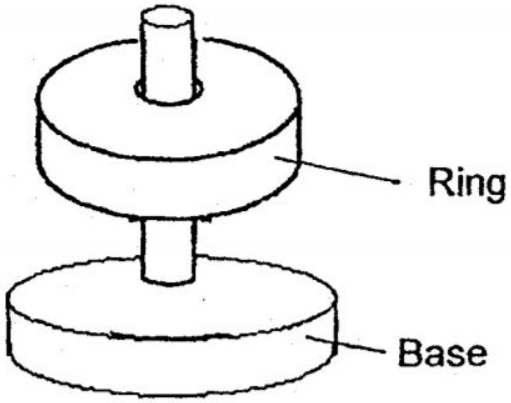
She observes that the ring floats above the base of Object P.

Study the statement below and choose the correct answer.

Both the base and the ring have like poles facing each other.

- **A)** True
- **B)** False

Alice slots a ring through the pole Object P.



Object P

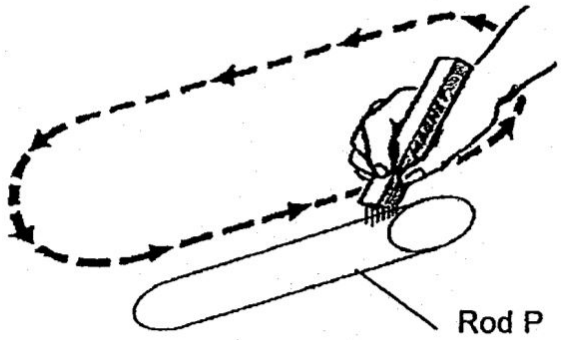
She observes that the ring floats above the base of Object P.

Study the statement below and choose the correct answer.

Both the base and the ring are made of a non-magnetic material.

- **A)** True
- **B)** False

Danny sets up the experiment below to turn Rod P into a temporary magnet.



What method is Danny using to make Rod P into a temporary magnet?

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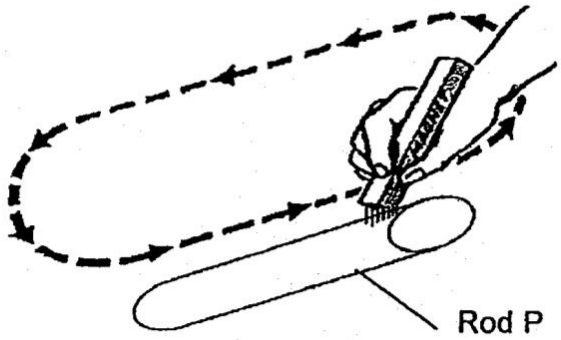

Using the same method, Danny wants to make Rod P into a magnet with a **stronger** magnetism. State 2 ways he can do so.

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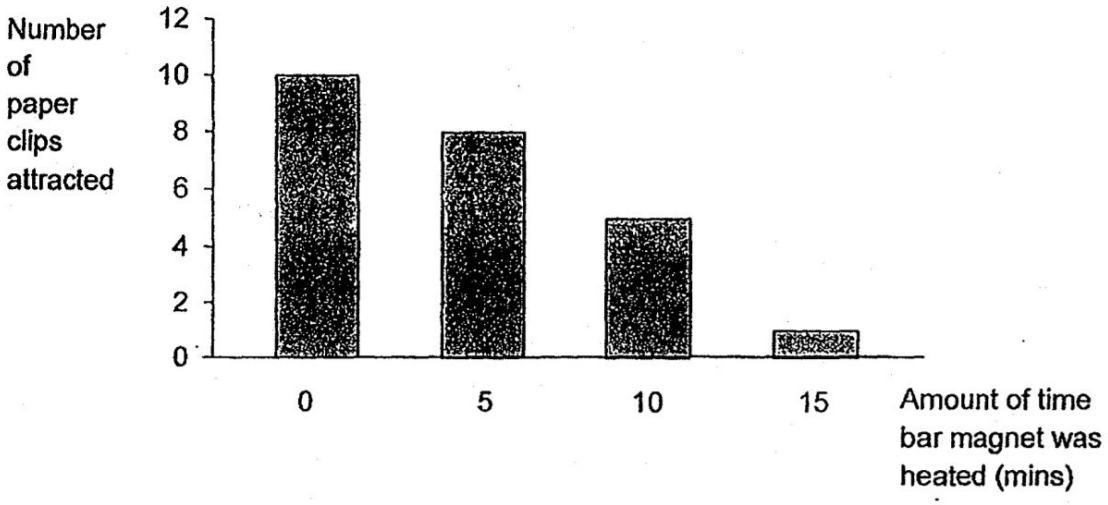
Elisa recorded the number of paper clips that are attracted to a bar magnet. She repeated the experiment after heating the bar magnet over a candle flame for different amount of time.

The bar graph below shows the number of paper clips that were attracted to the bar magnet.



How many paper clips could the bar magnet attract after it was heated for 10 minutes?

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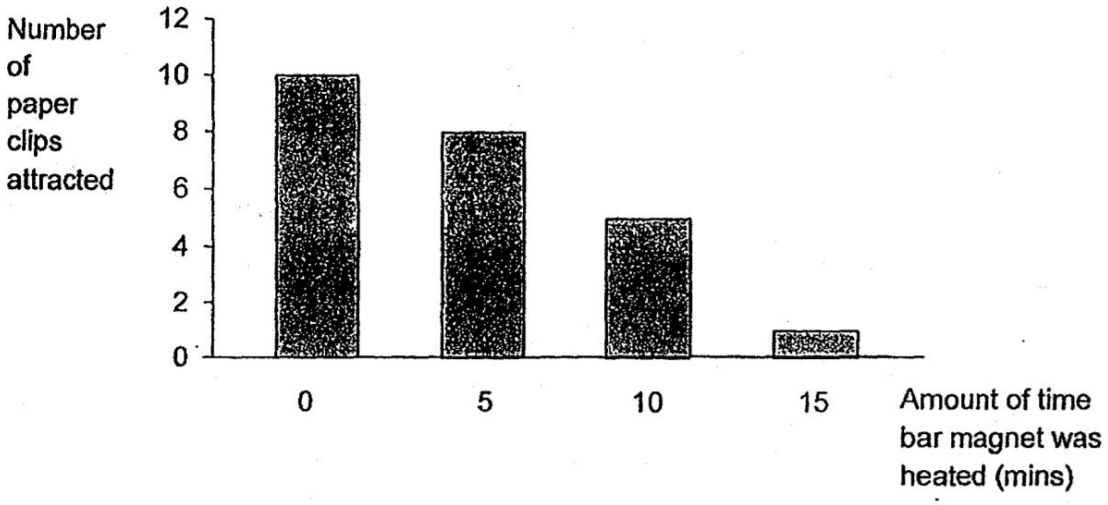

From the experiment, what can Elisa conclude about the effect of heating on the bar magnet?

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