

Combined Science  
PAPER 6  
Foundation Tier

Friday 14 June 2024 – Afternoon

Time: 1 hour 10 minutes

Diagram Booklet

THIS DIAGRAM BOOKLET MUST BE RETURNED WITH THE QUESTION PAPER AT THE END OF THE EXAMINATION.

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

## INSTRUCTIONS

There may be spare copies of some diagrams in case you need them.

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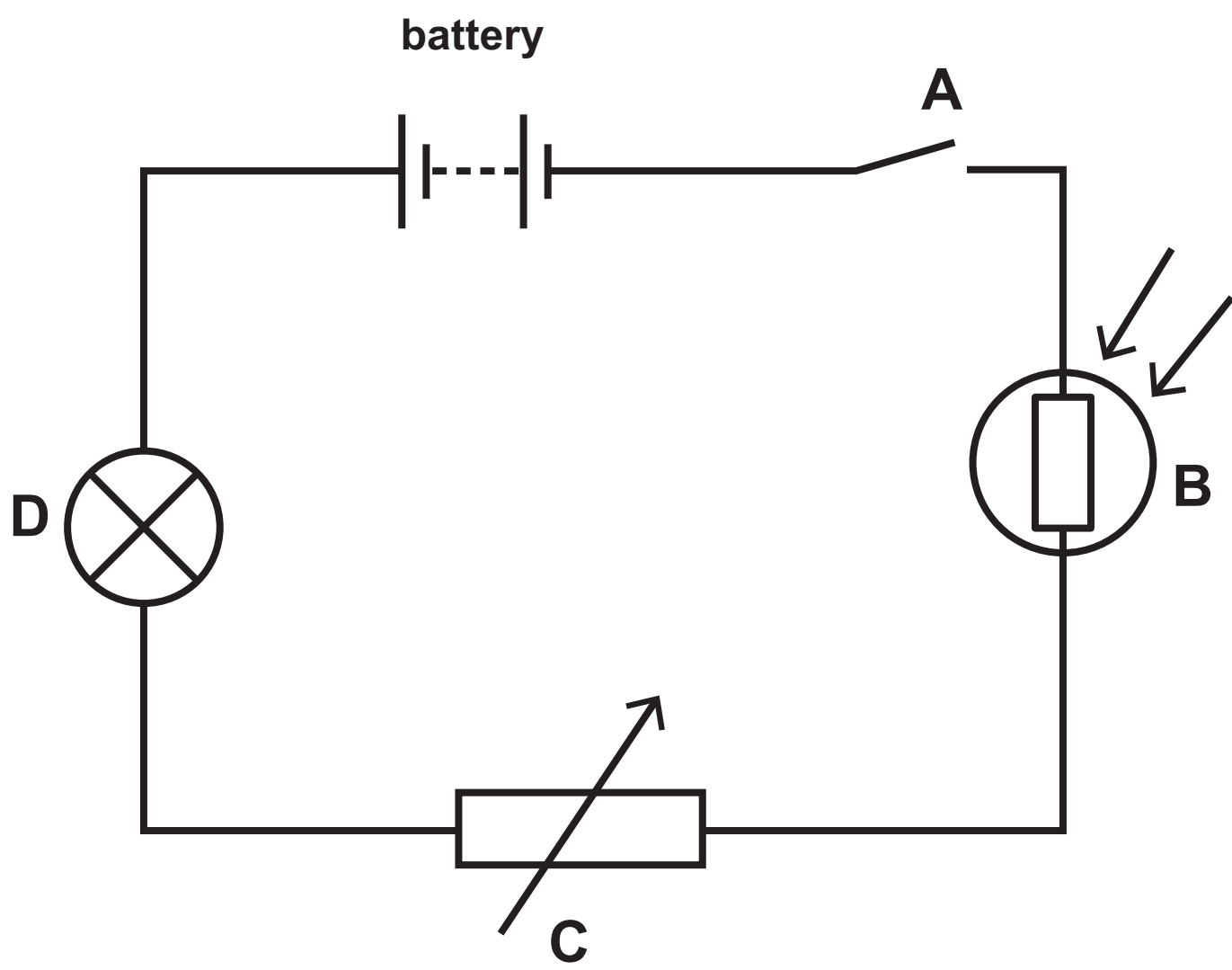
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## Question 1(a)

FIGURE 1



A \_\_\_\_\_

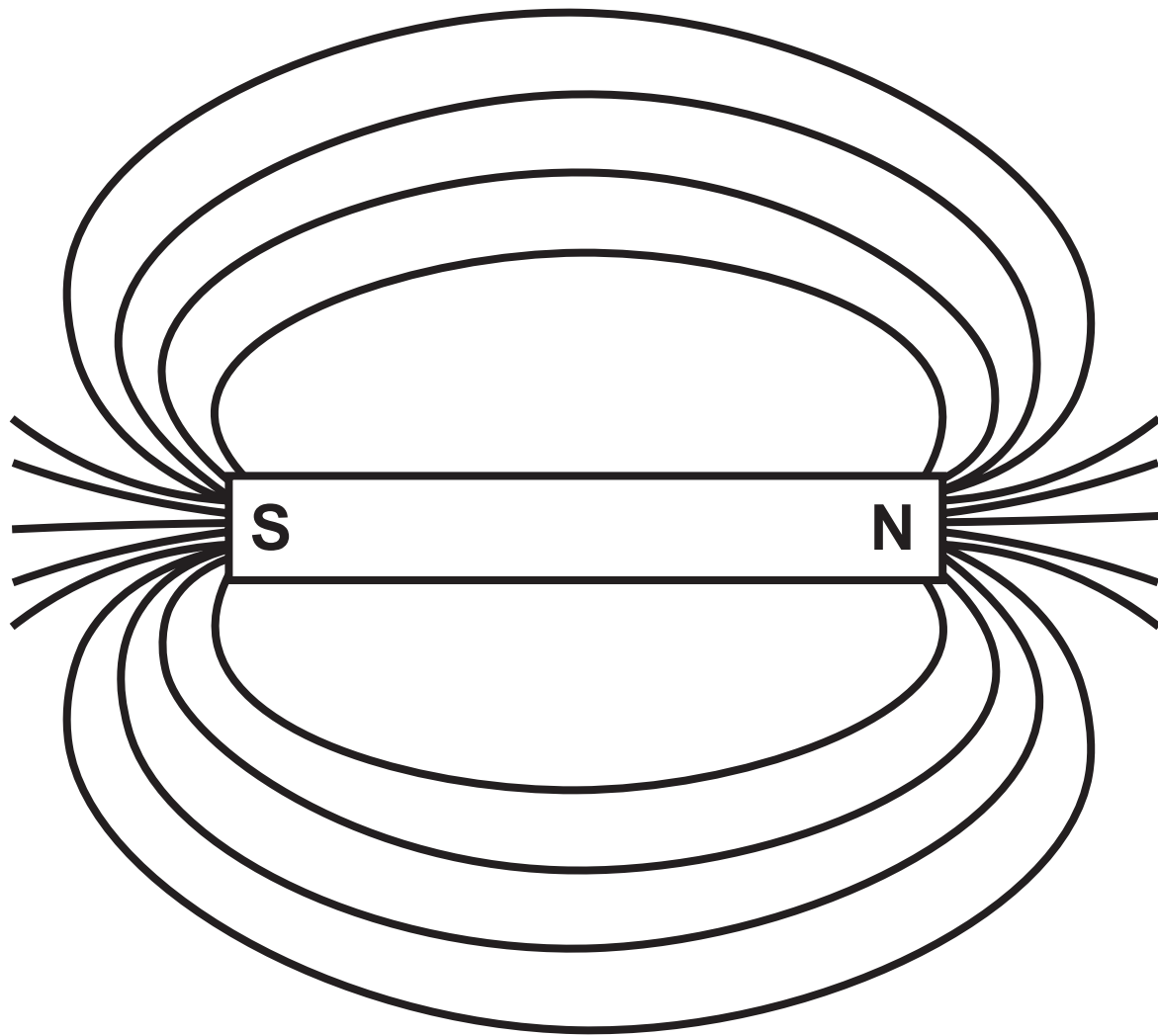
B \_\_\_\_\_

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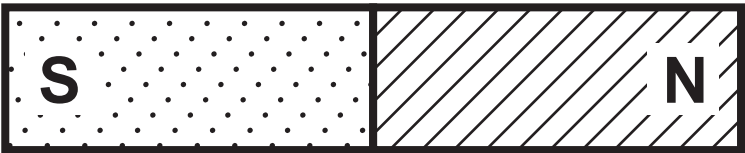
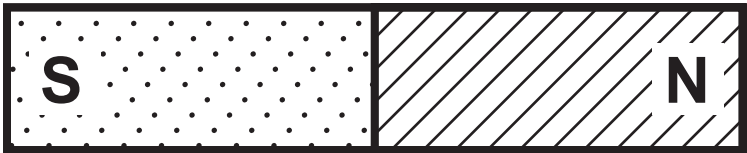
## Question 2(a)

FIGURE 2



Question 2(b)

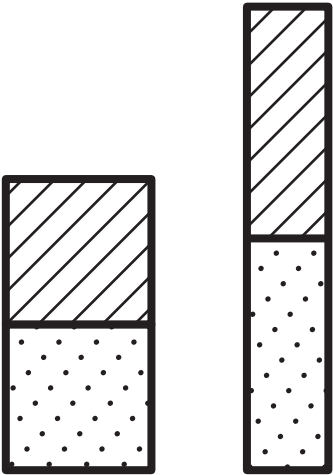
FIGURE 3



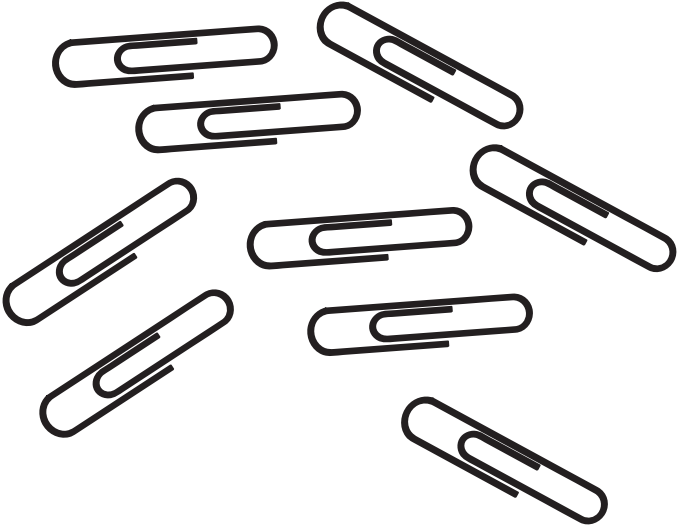
Question 2(c)

FIGURE 4

two permanent magnets

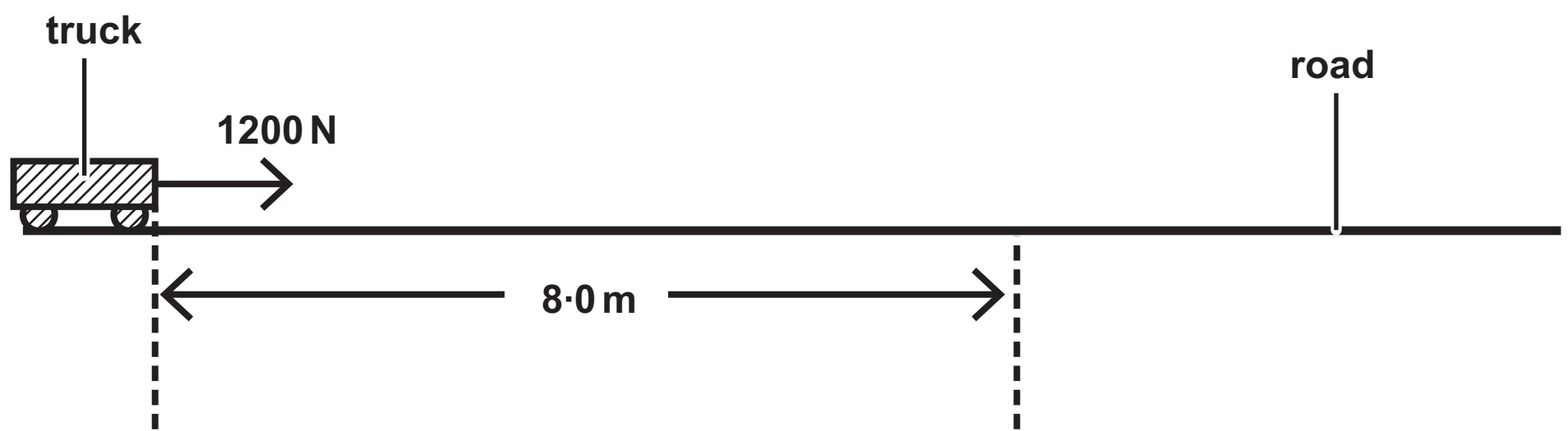


paper clips



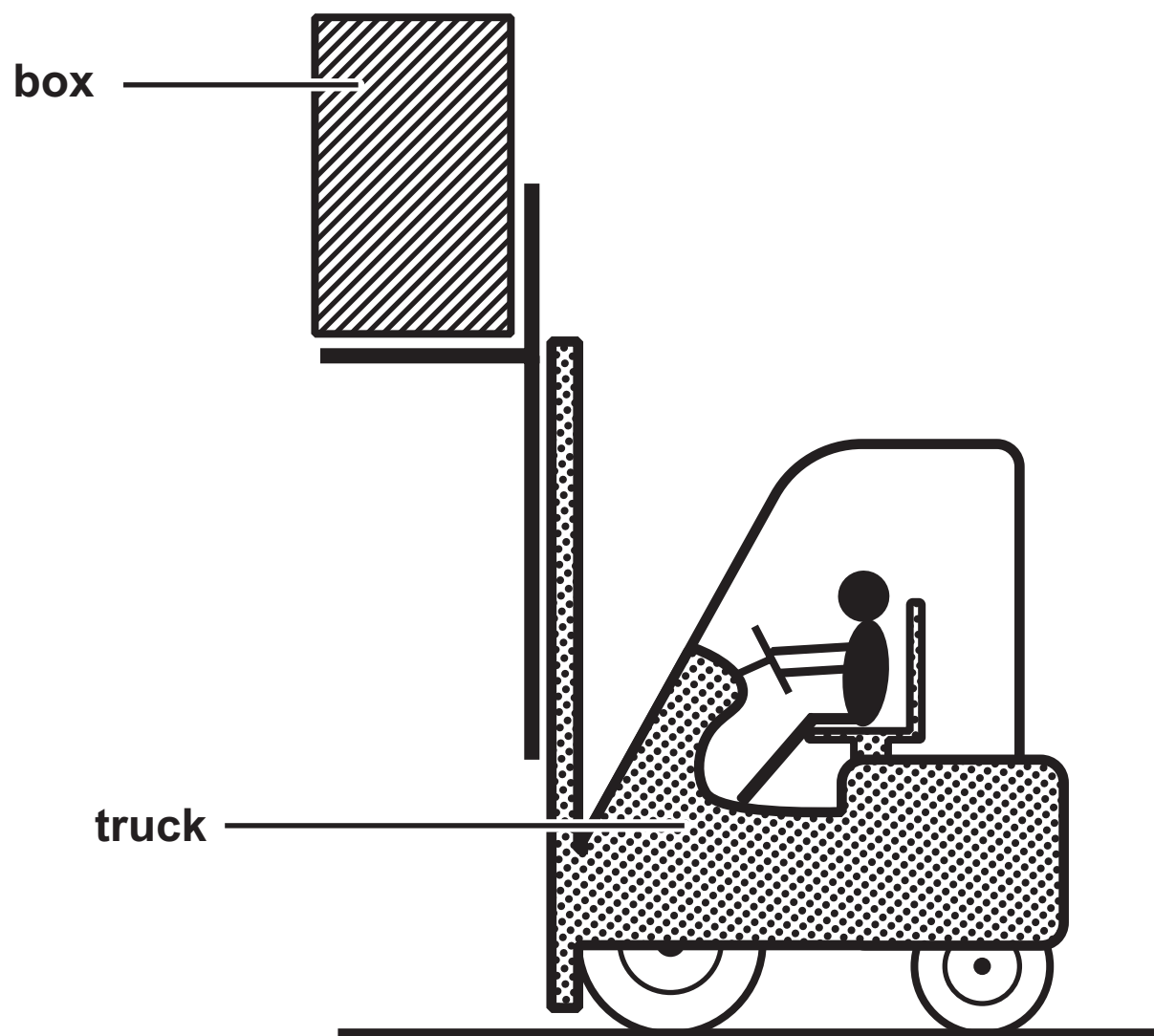
## Question 3(a)

FIGURE 5



## Question 3(c) – FIGURE 6

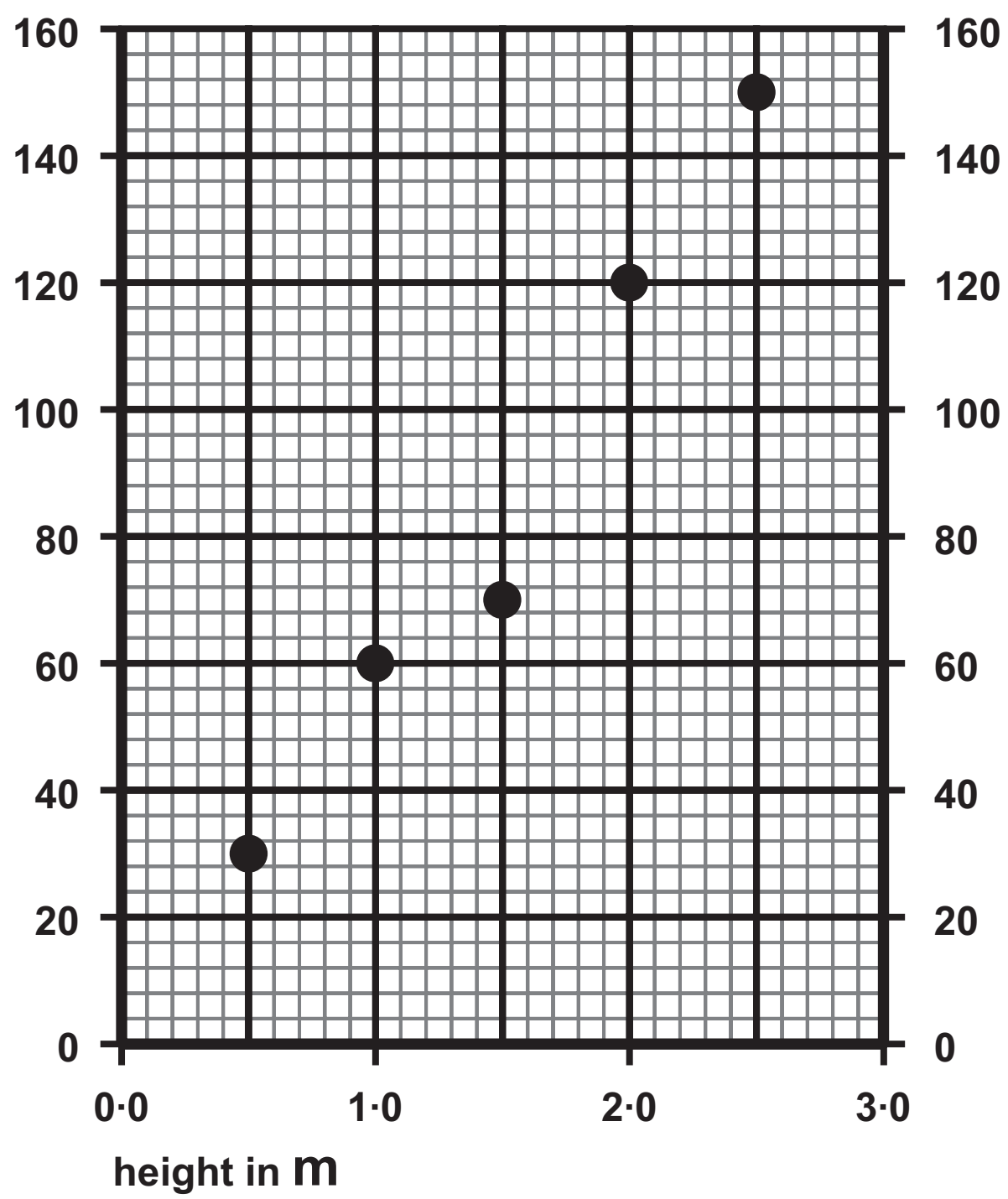
FIGURE 6





## Question 3(c) – FIGURE 7

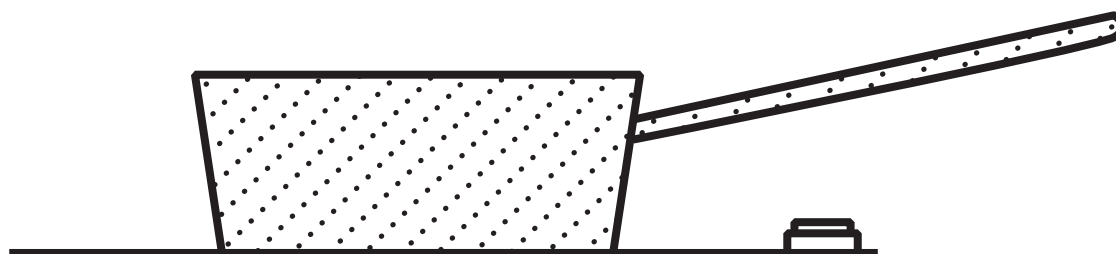
FIGURE 7

 $\Delta GPE$  in J

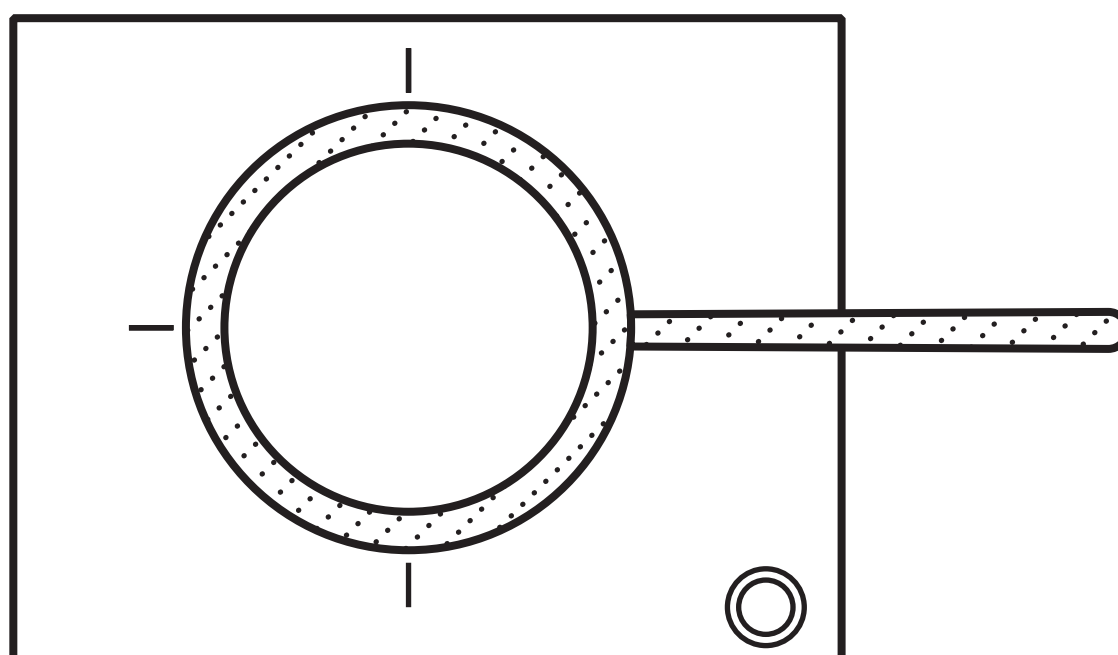
## Question 4

FIGURE 8

SIDE VIEW



TOP VIEW



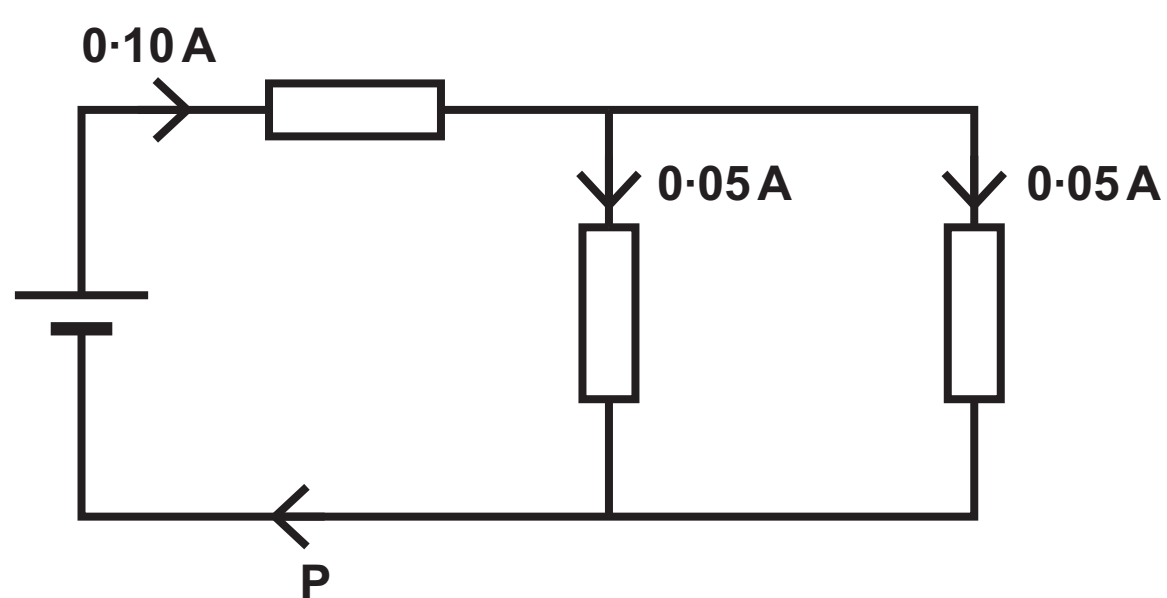
## Question 4(a)

FIGURE 9

<b>mass of milk</b>	<b>0·82 kg</b>
<b>starting temperature of milk</b>	<b>10 °C</b>
<b>final temperature of milk</b>	<b>40 °C</b>
<b>change in thermal energy of milk</b>	<b>96 000 J</b>

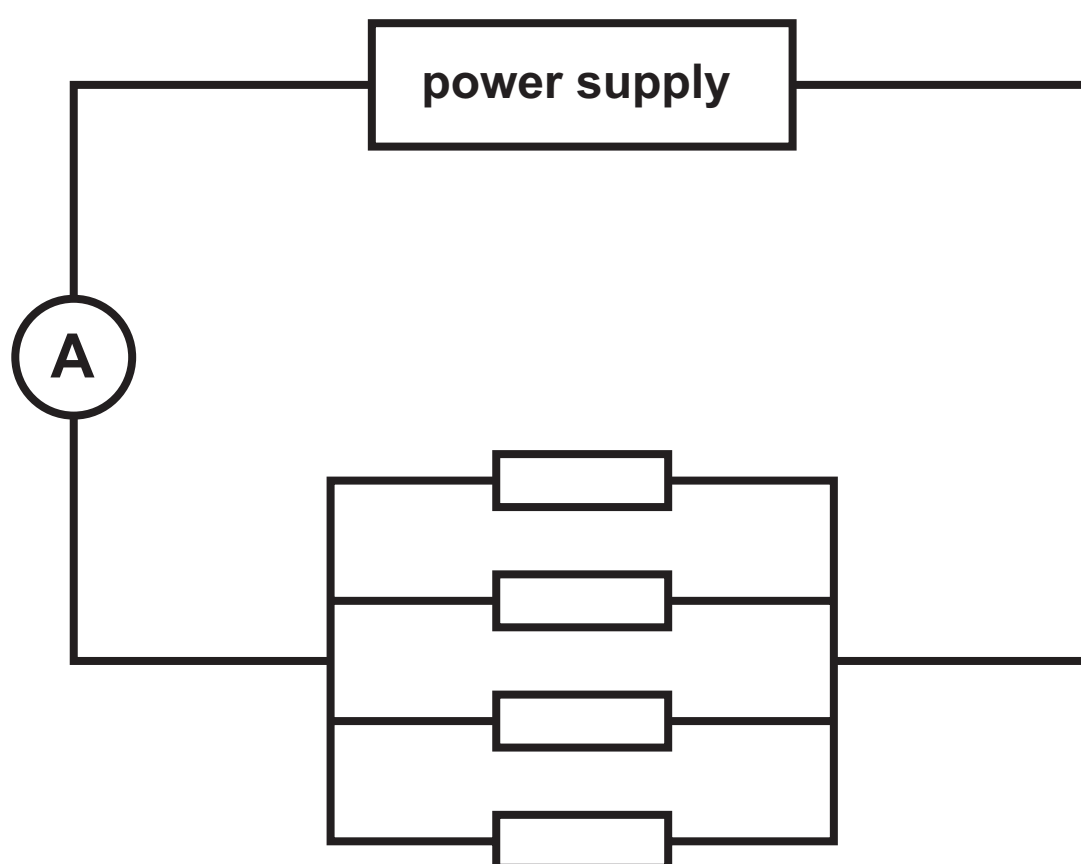
## Question 5(a)

FIGURE 10



## Question 5(b)(i)

FIGURE 11



Question 5(b)(ii)

FIGURE 12

number of resistors	current in mA	voltage in V
4		6·00
3	27·3	6·00
2	18·2	6·00
1	9·1	6·00

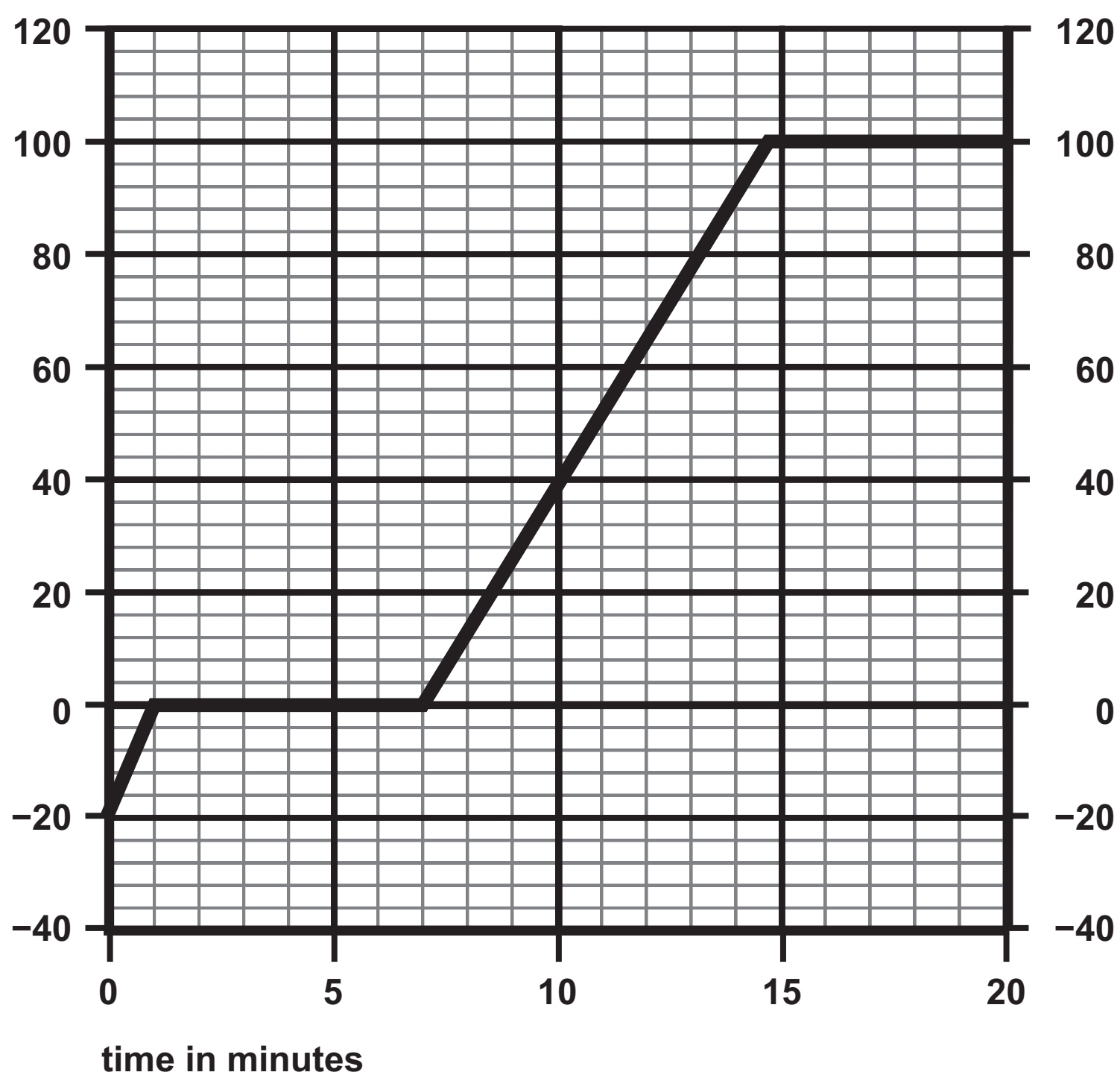
Question 6(b)

FIGURE 13

	density in g/cm <sup>3</sup>
solid aluminium	2·70
liquid aluminium	2·38

## Question 6(d)

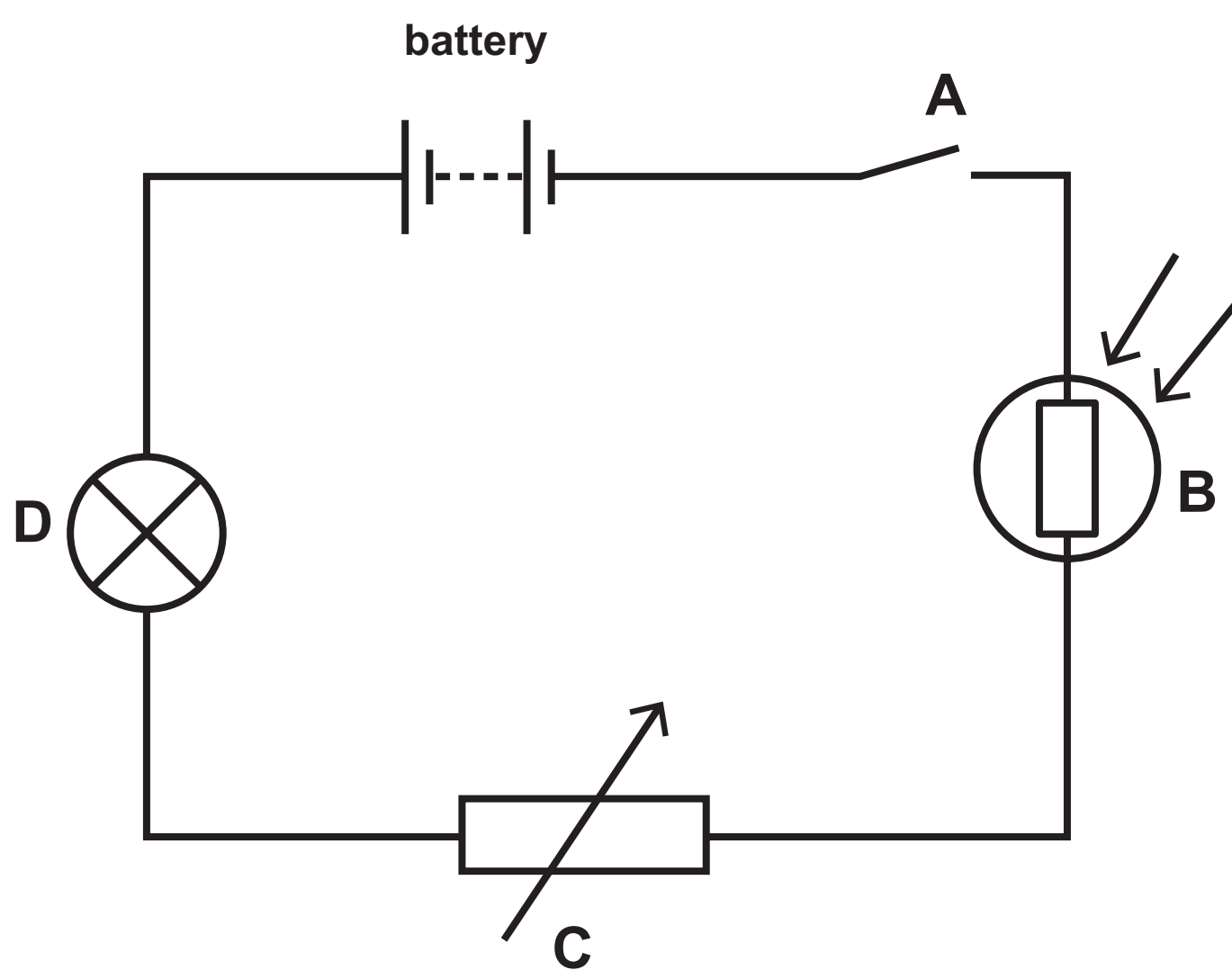
FIGURE 14

temperature in  $^{\circ}\text{C}$ 



## Question 1(a)

FIGURE 1



A \_\_\_\_\_

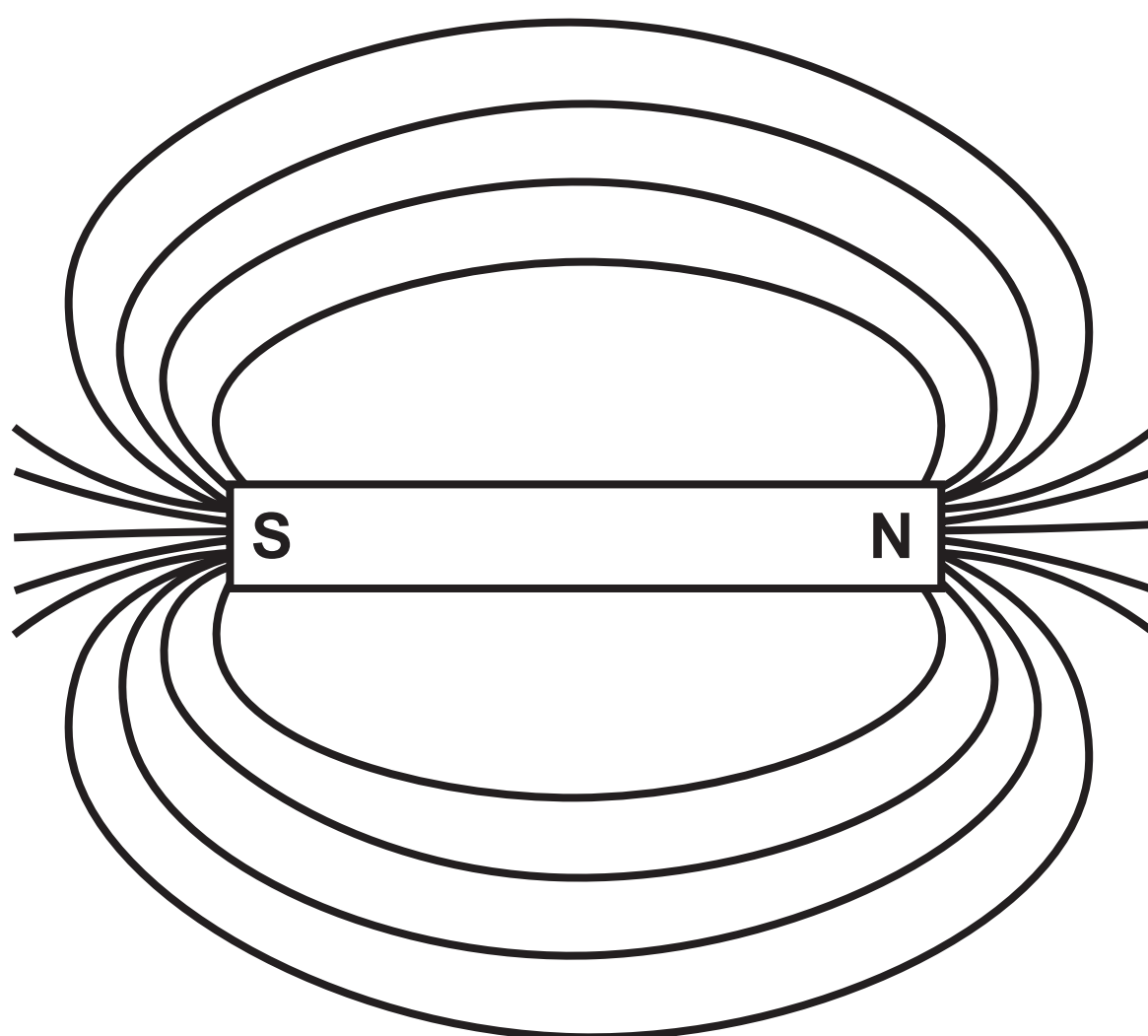
B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

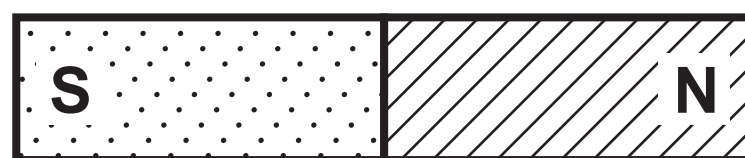
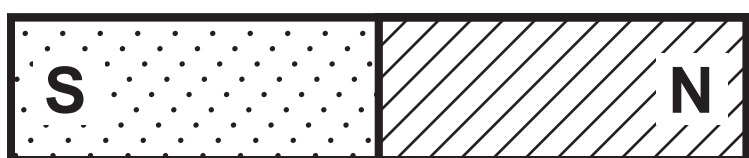
## Question 2(a)

FIGURE 2



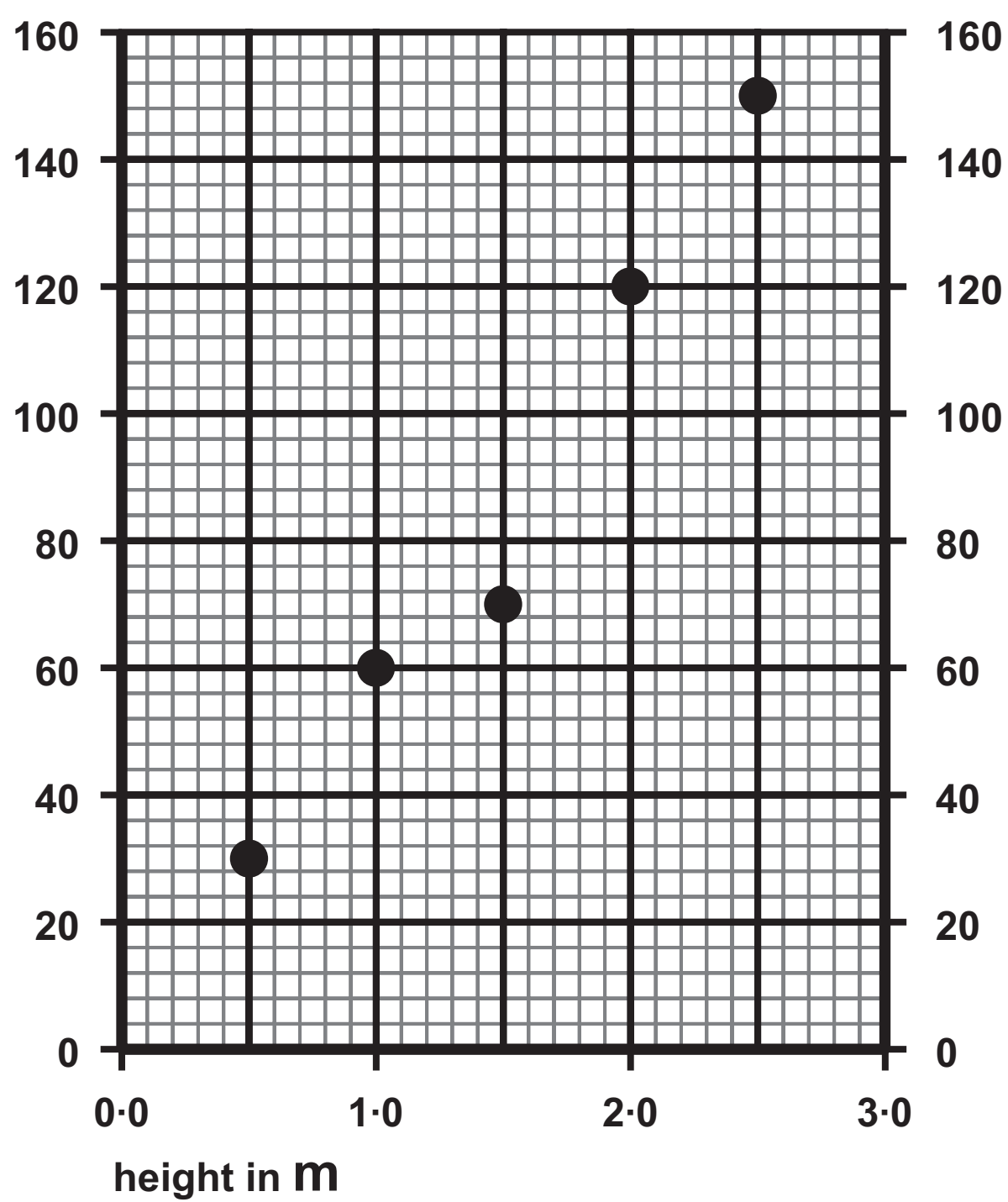
## Question 2(b)

FIGURE 3



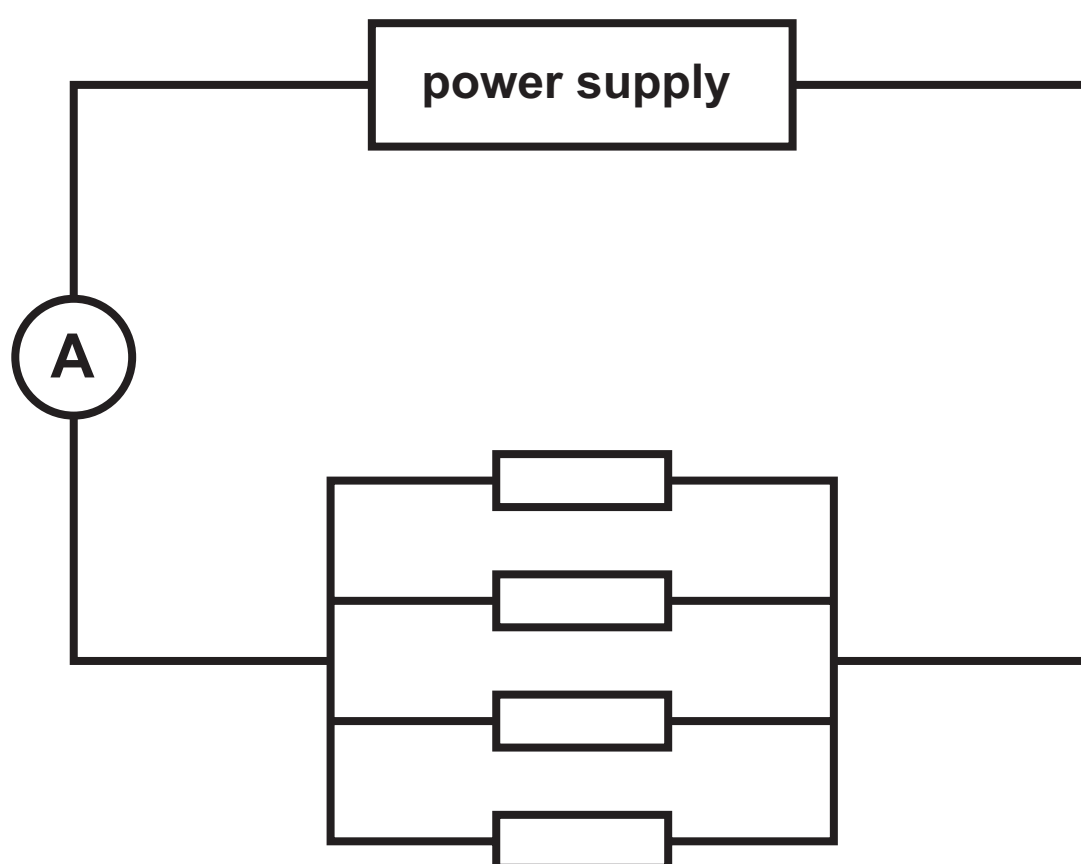
## Question 3(c) – FIGURE 7

FIGURE 7

 $\Delta GPE$  in J

## Question 5(b)(i)

FIGURE 11



Question 5(b)(ii)

FIGURE 12

number of resistors	current in mA	voltage in V
4		6·00
3	27·3	6·00
2	18·2	6·00
1	9·1	6·00

**Source information:**

**Question 4**

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