

Physics
UNIT: 4PH1
Science (Double Award) 4SD0
PAPER: 1PR

Wednesday 22 May 2024 – Morning

Time: 2 hours

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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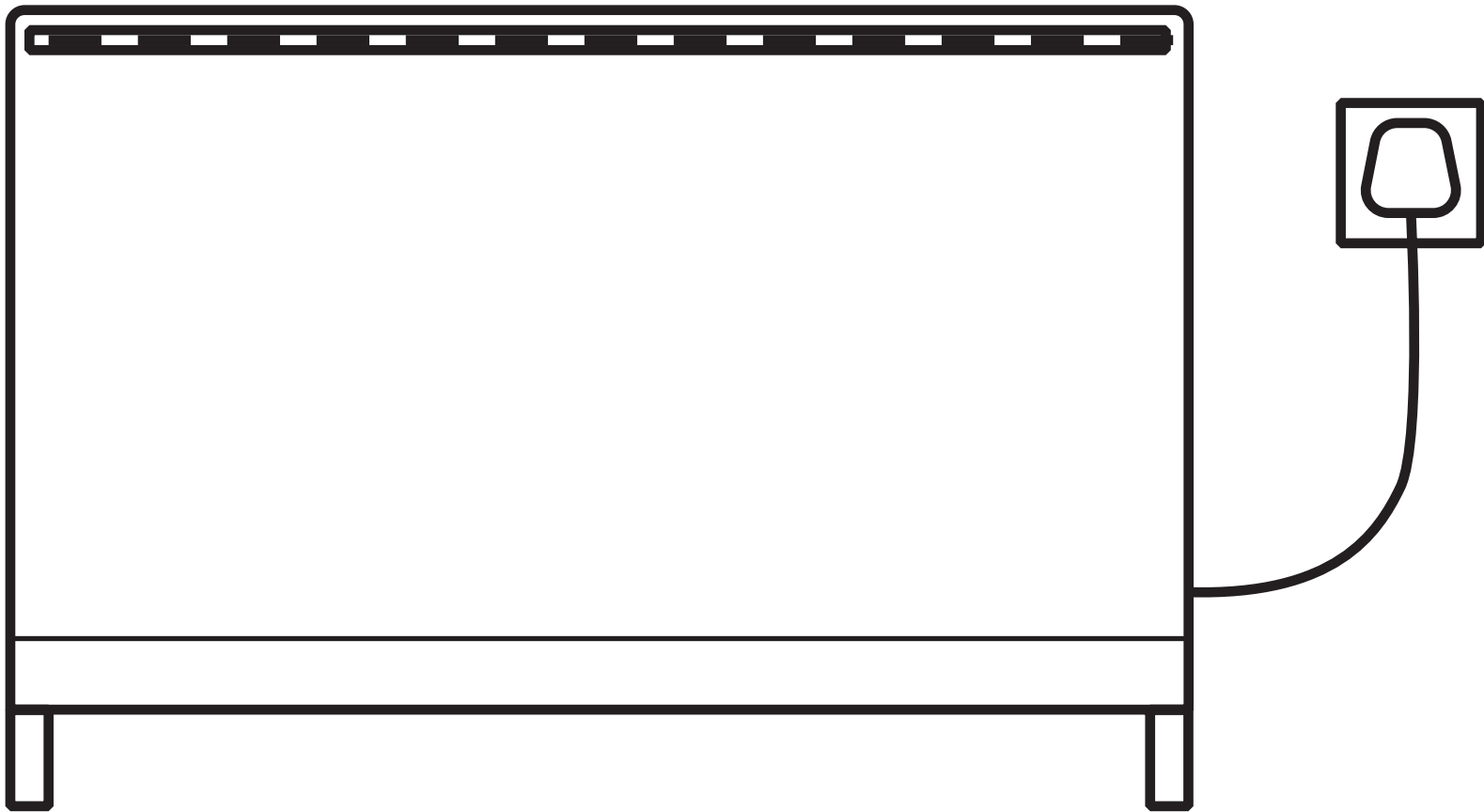
Spare Copies

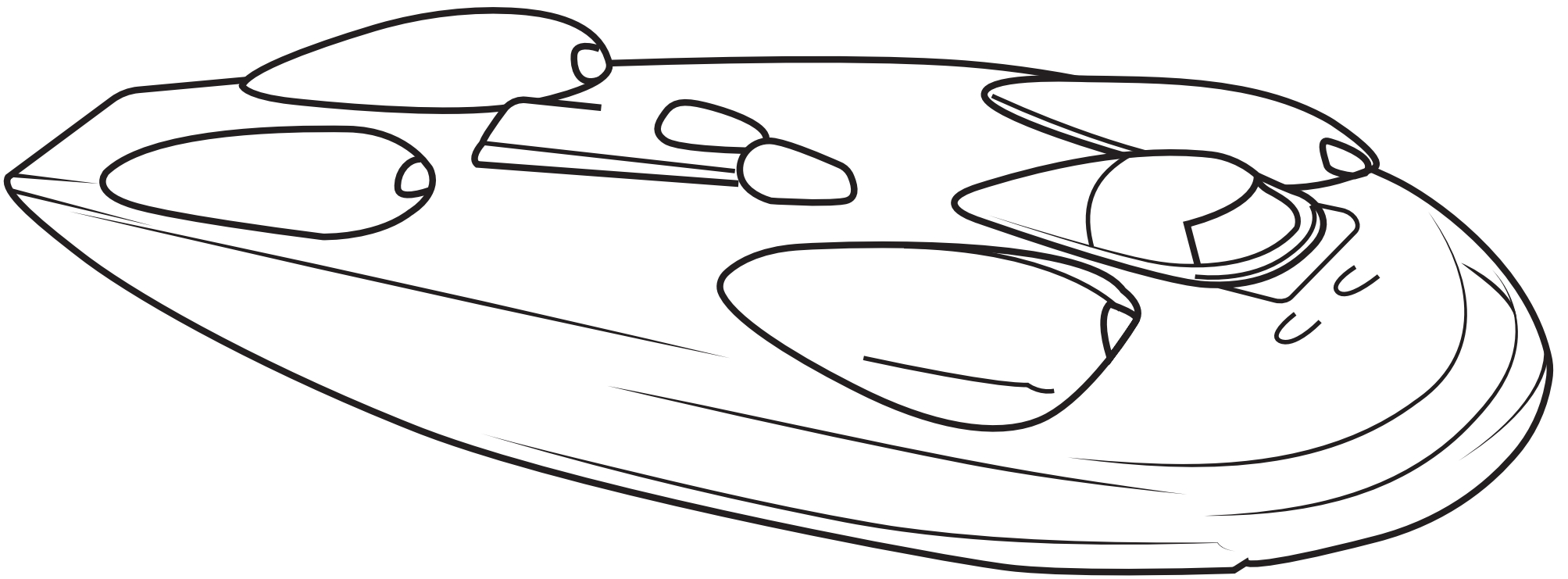
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Question 1(a)

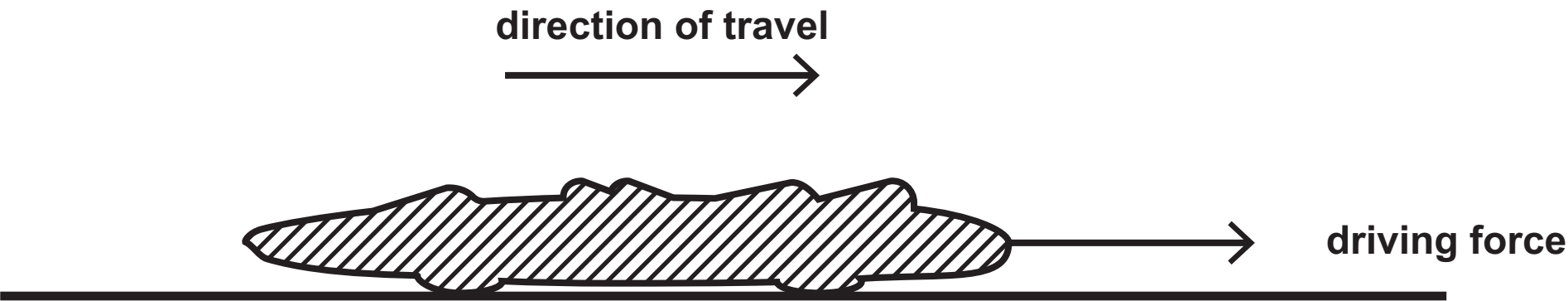
radio waves	microwaves	A	visible light	B	x-rays	gamma rays
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Question 2



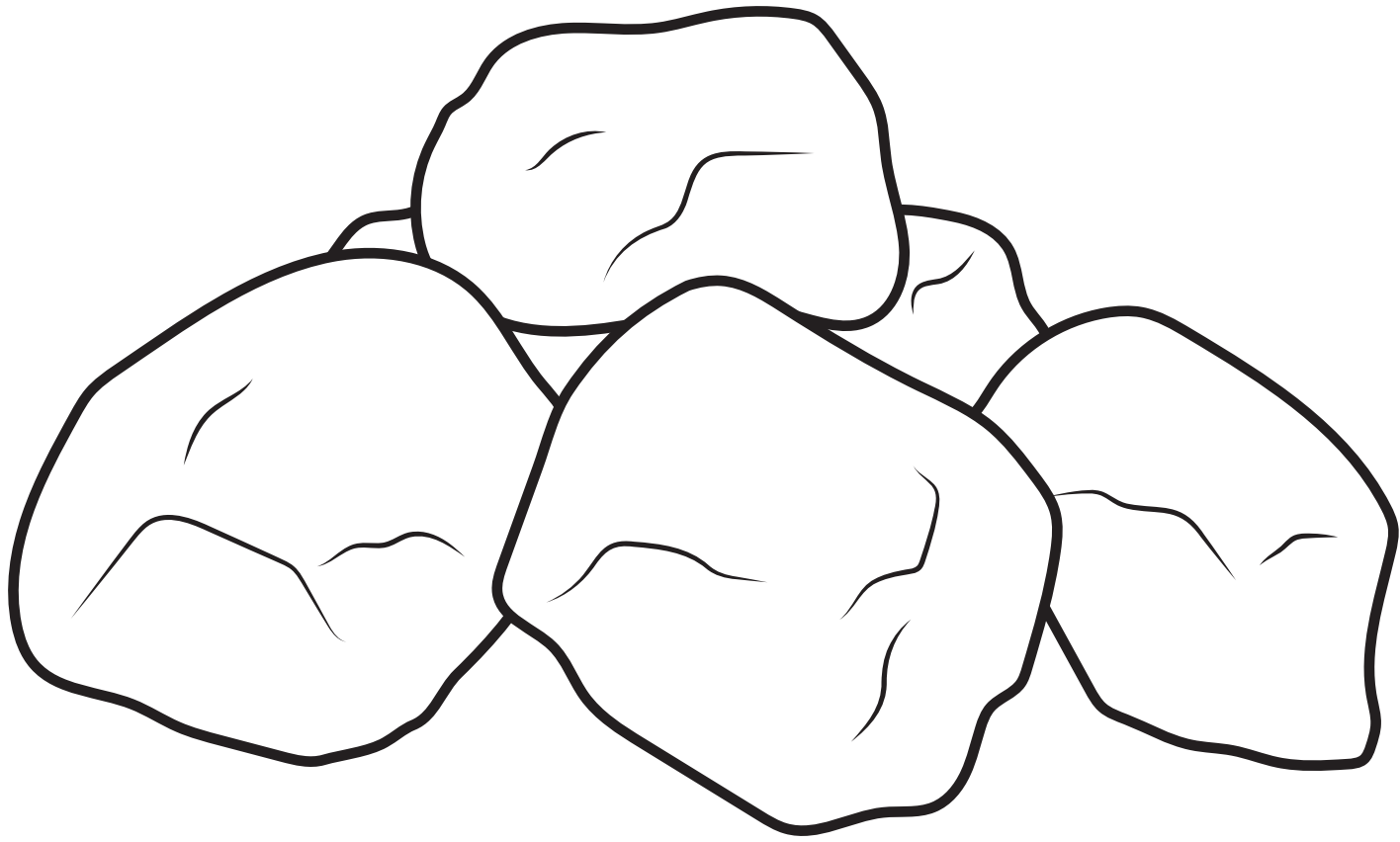
Question 3

Question 3(b)



Question 4(a)

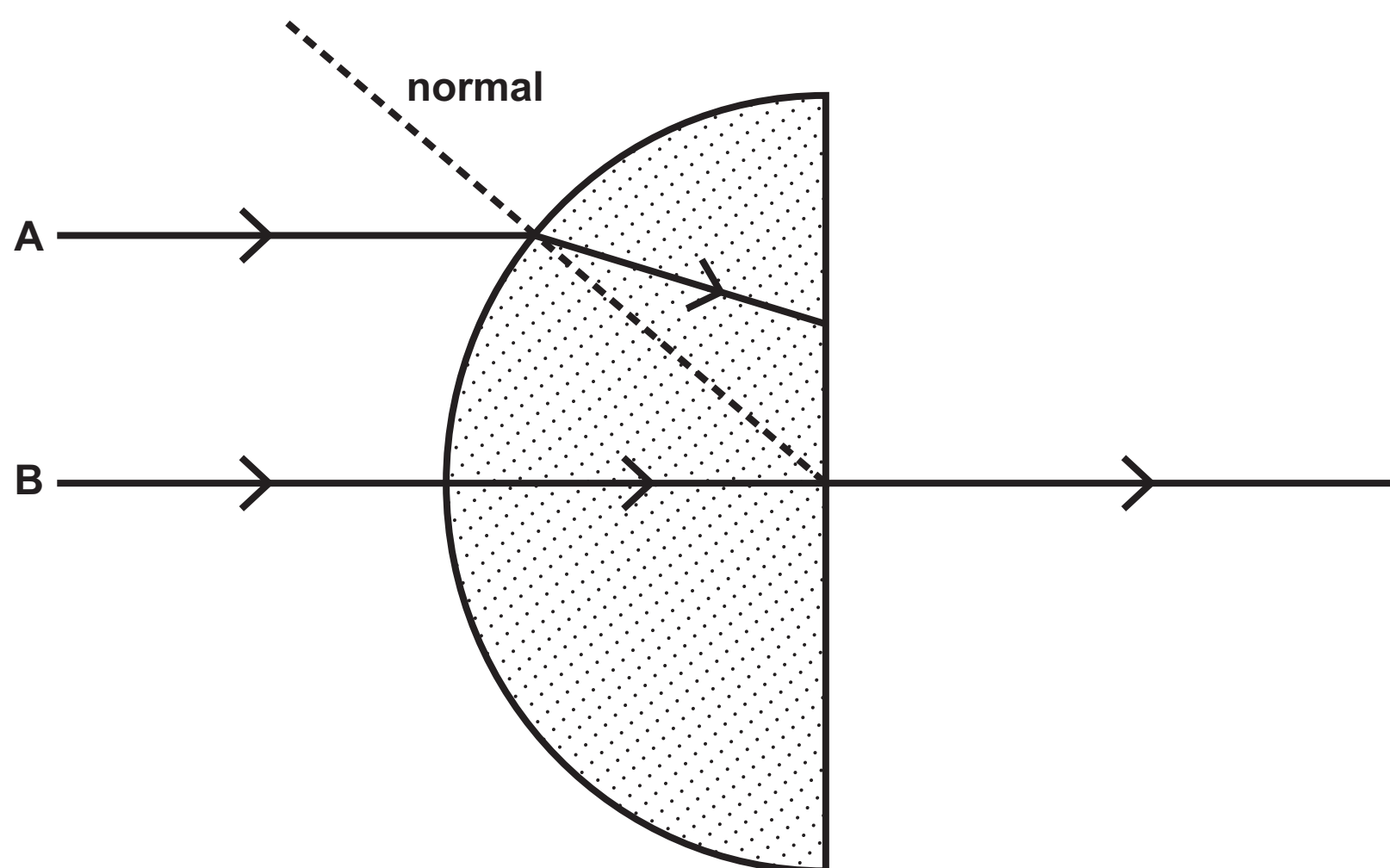
Stage of evolution	Occurs in the life cycle of the Sun
black hole	
main sequence	
nebula	
neutron star	
red giant	
red supergiant	
supernova	
white dwarf	

Question 5

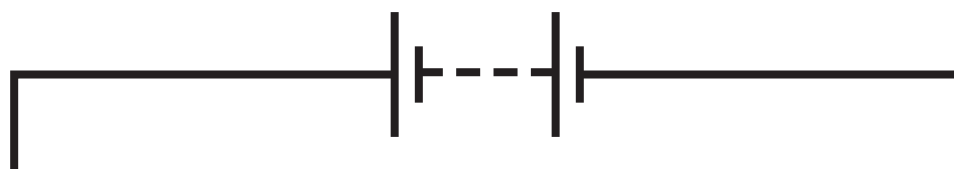
Question 5(b)

Rock	Mass in g	Volume in cm ³
A	15	6.3
B	13	6.1
C	16	7.5

Question 6

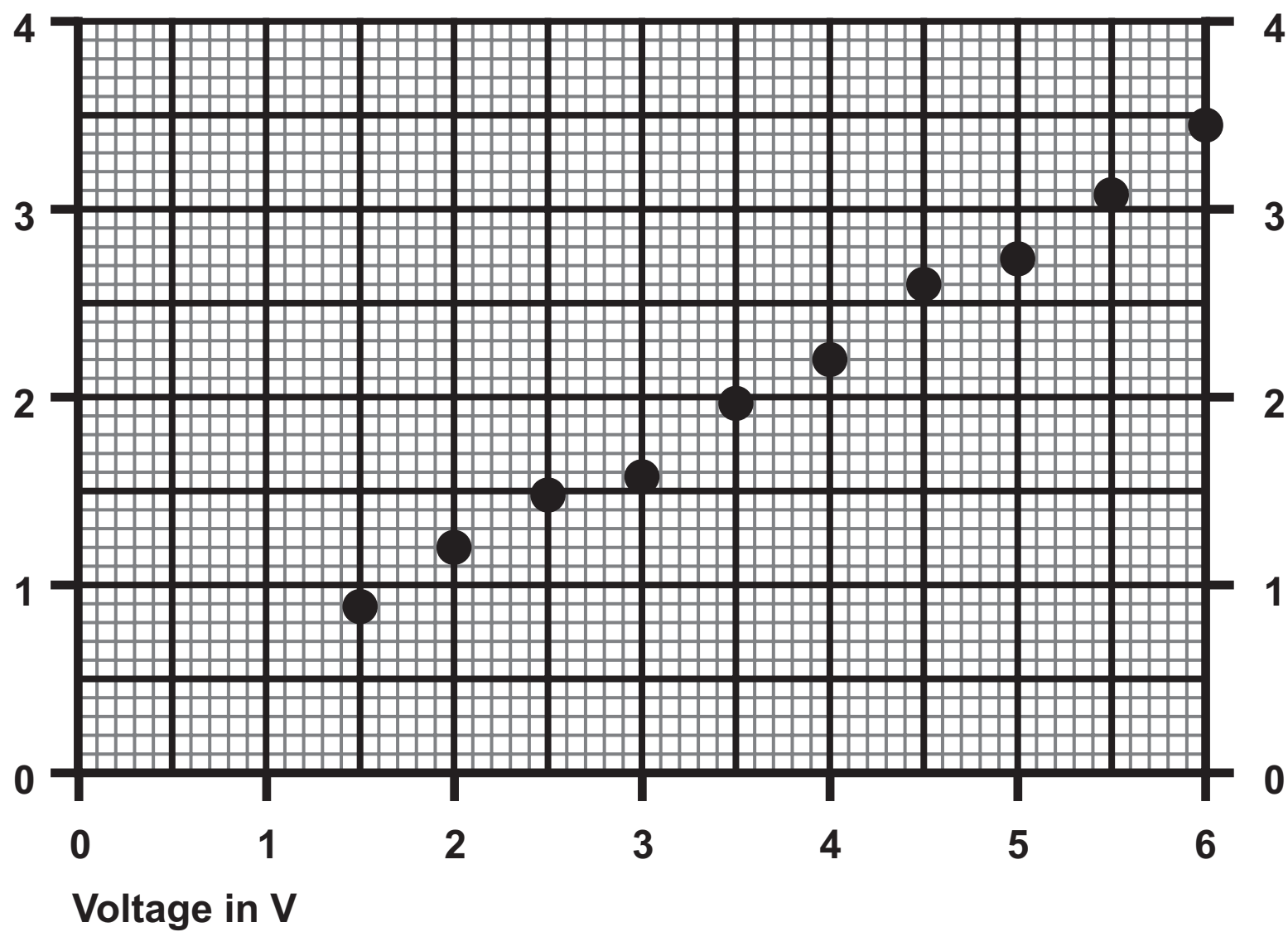


Question 7(a)

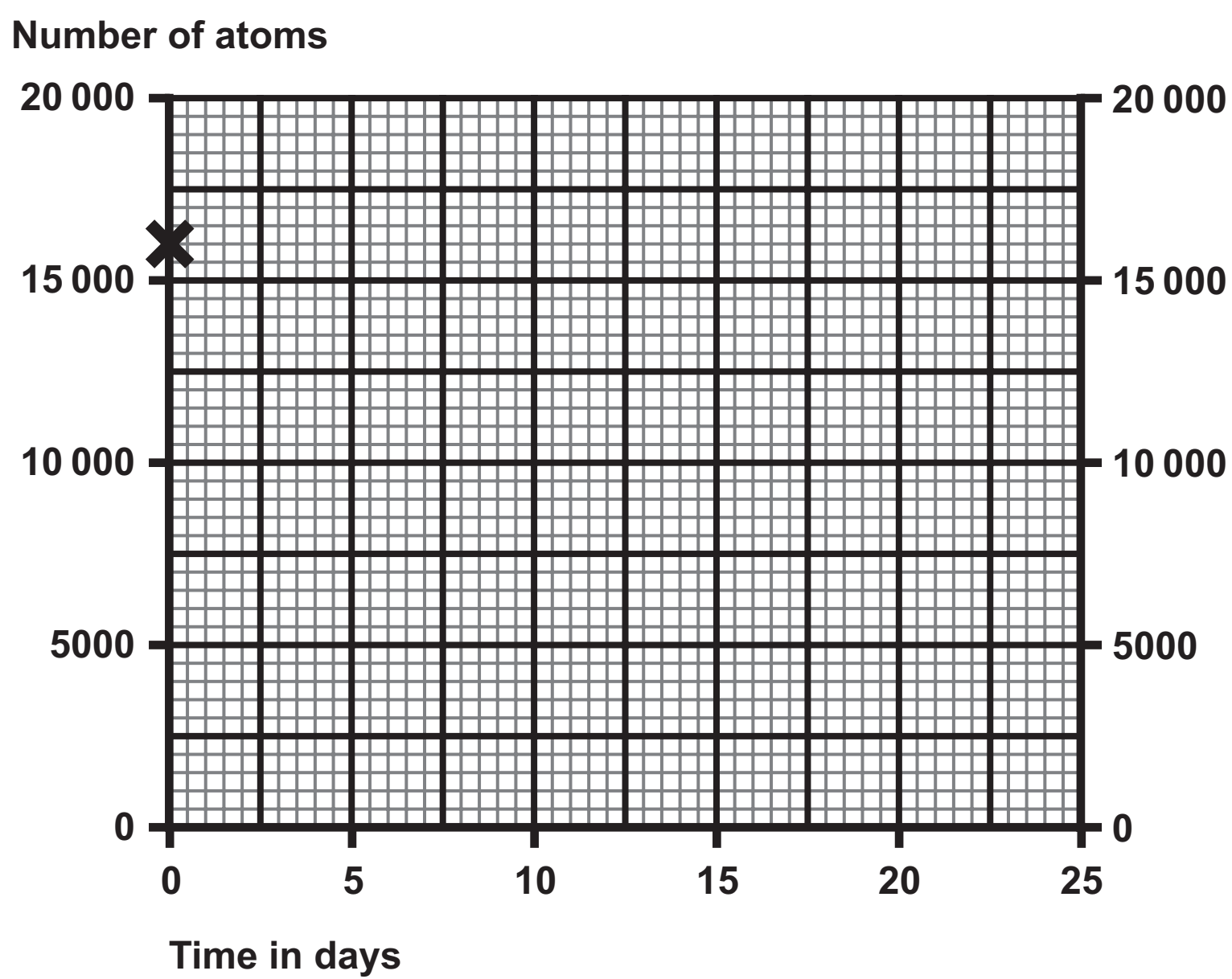


Question 7(b)

Current in mA



Question 8(a)(iii)

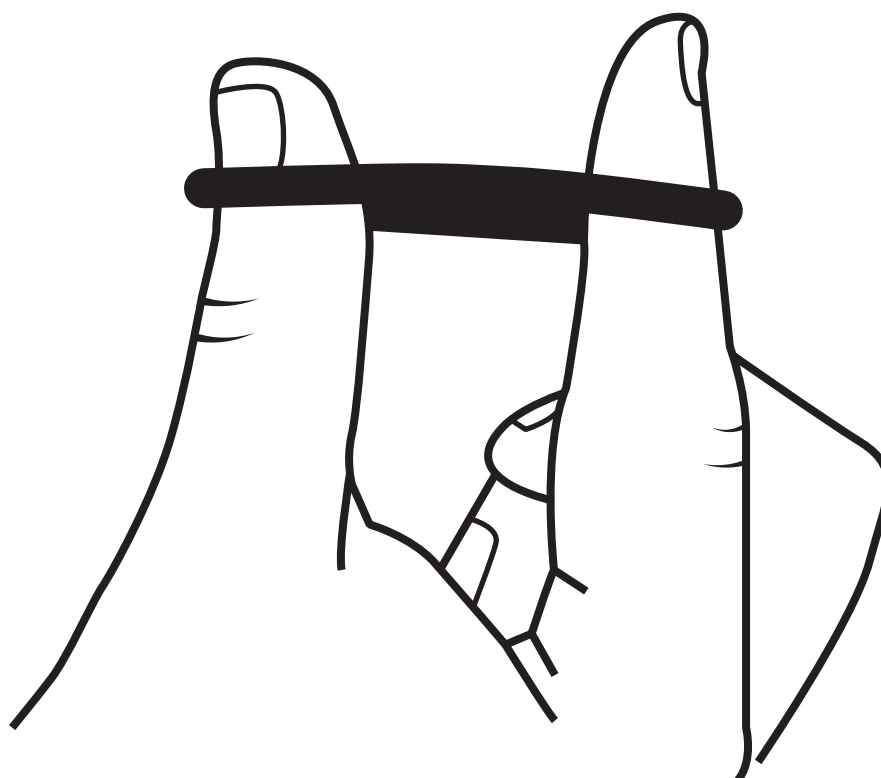


Question 8(c)

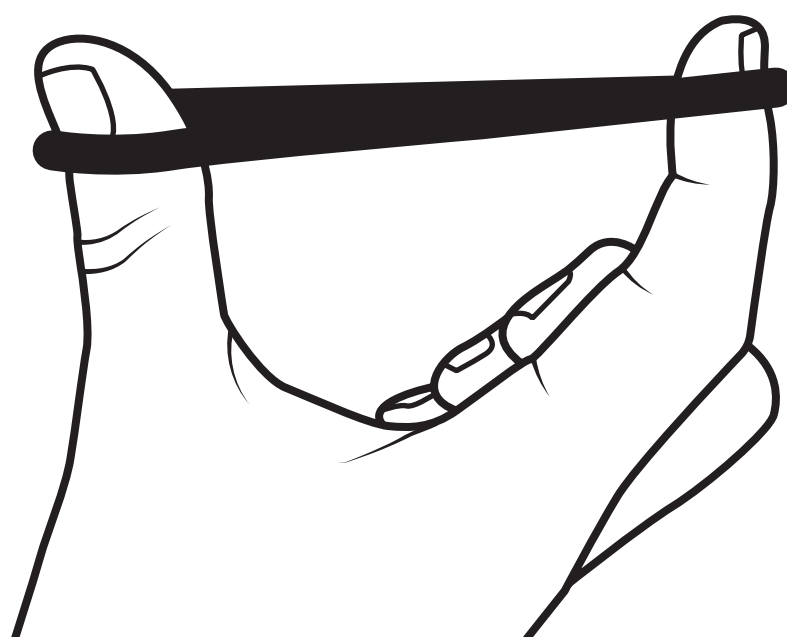
Isotope	Type(s) of radiation emitted	Half-life
iodine-131	beta and gamma	8 days
technetium-99m	gamma	6 hours

Question 9(a)

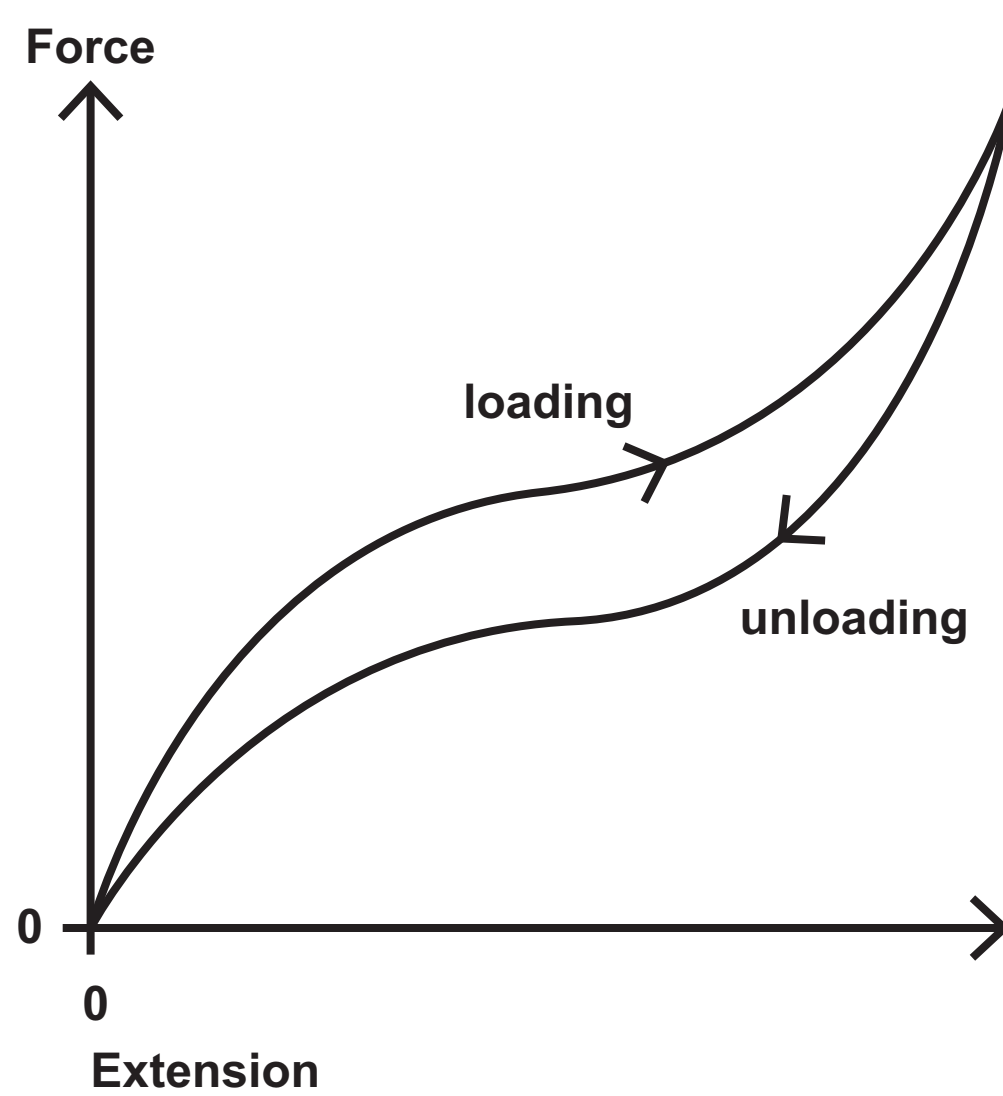
BEFORE



AFTER



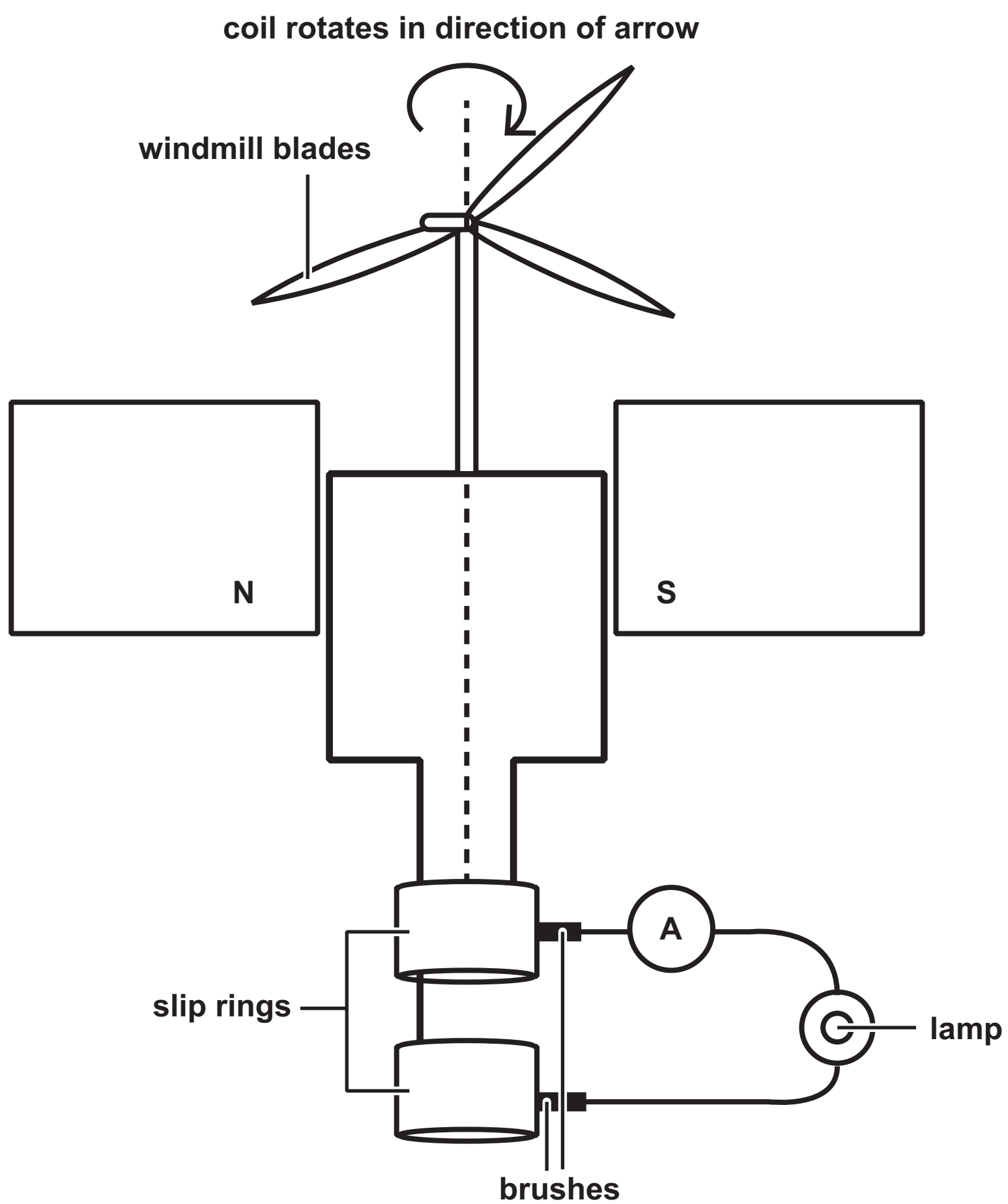
Question 9(b)



Question 10

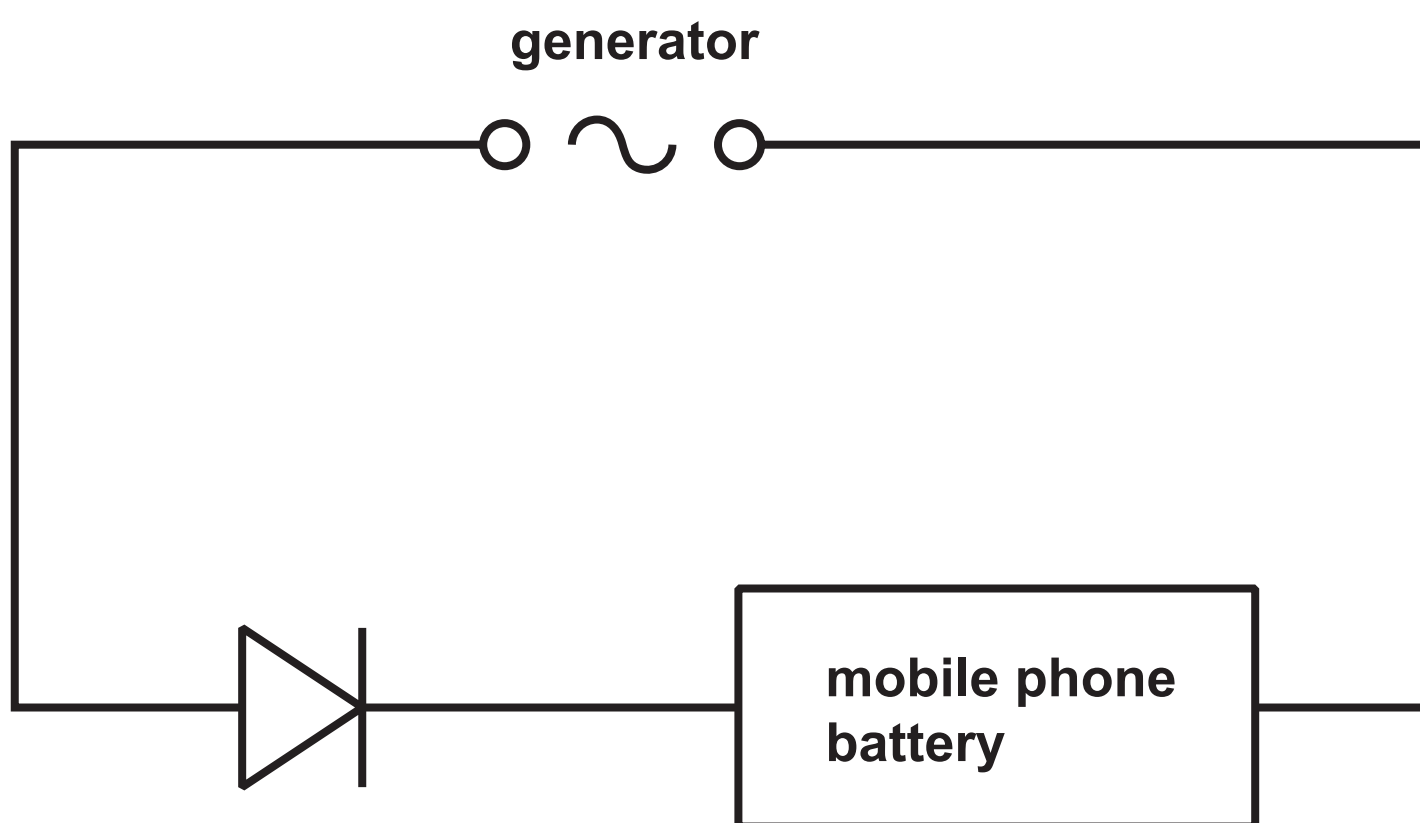
DIAGRAM 1

TOP VIEW



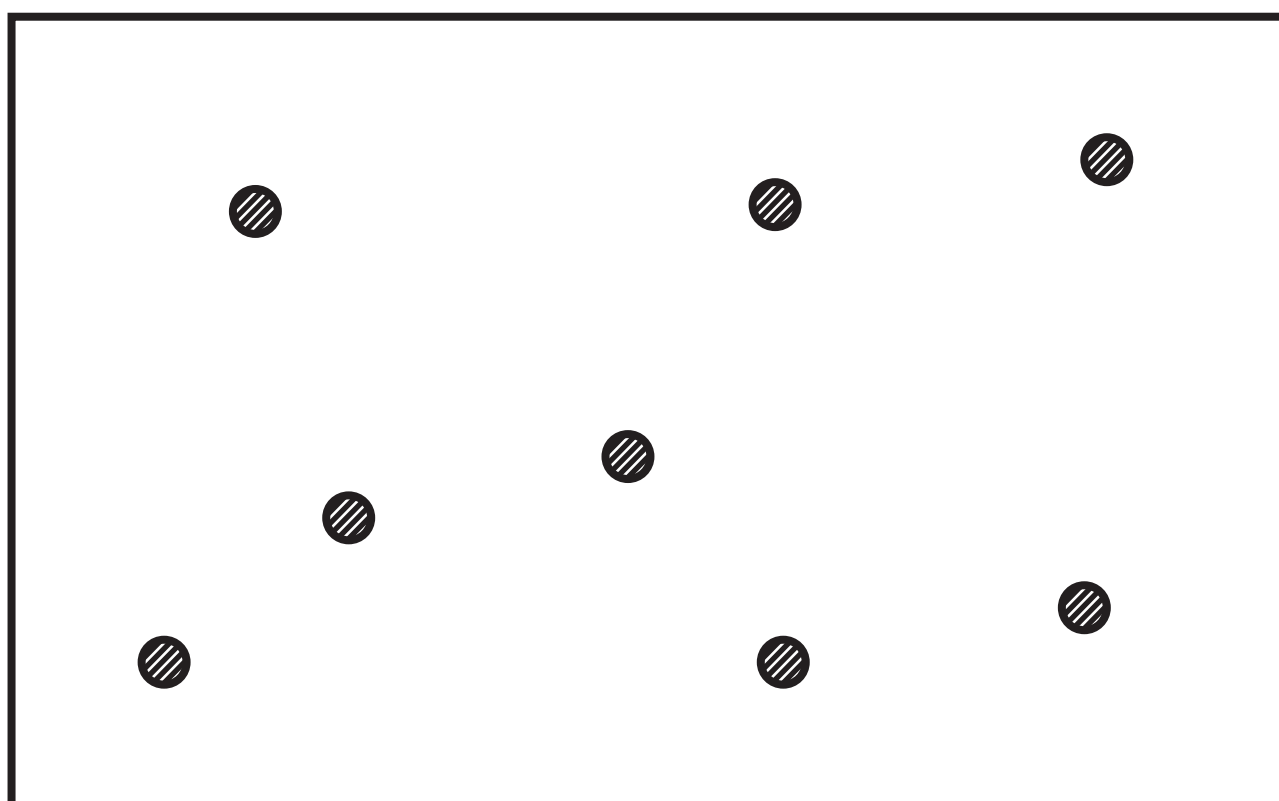
Question 10(b)

DIAGRAM 2



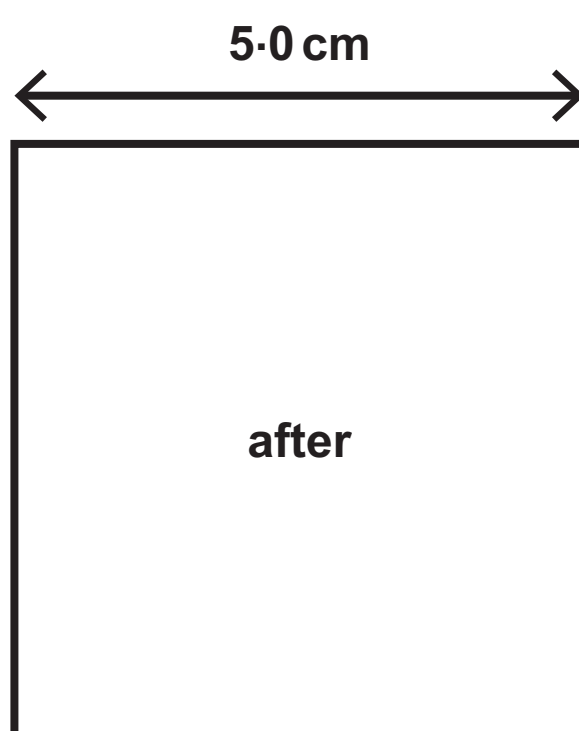
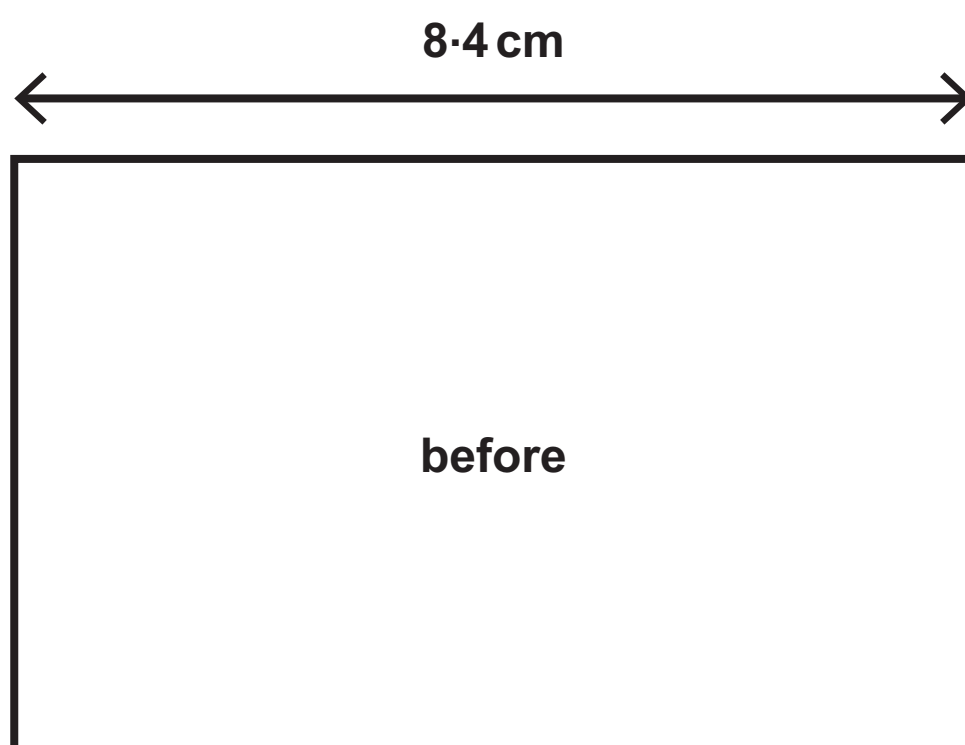
Question 11(a)

DIAGRAM 1

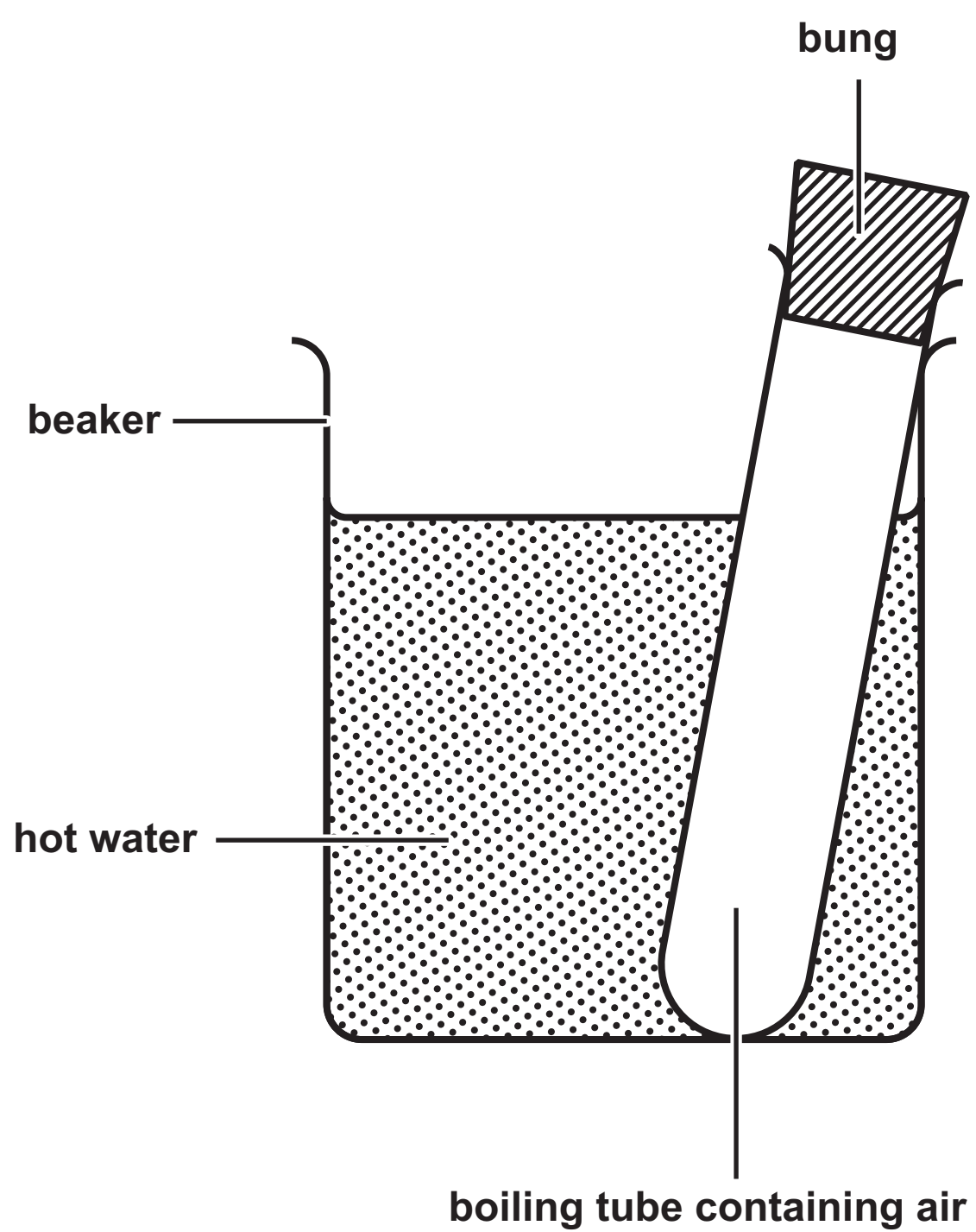


Question 11(b)

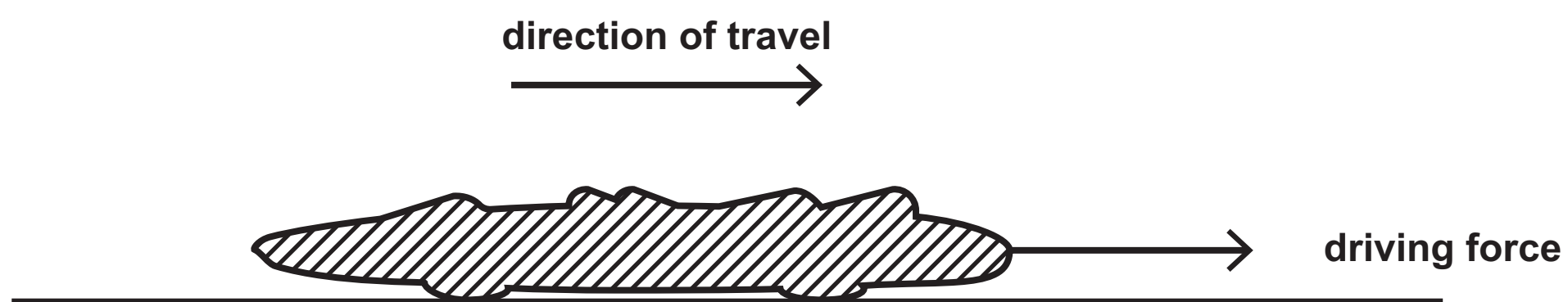
DIAGRAM 2



Question 12



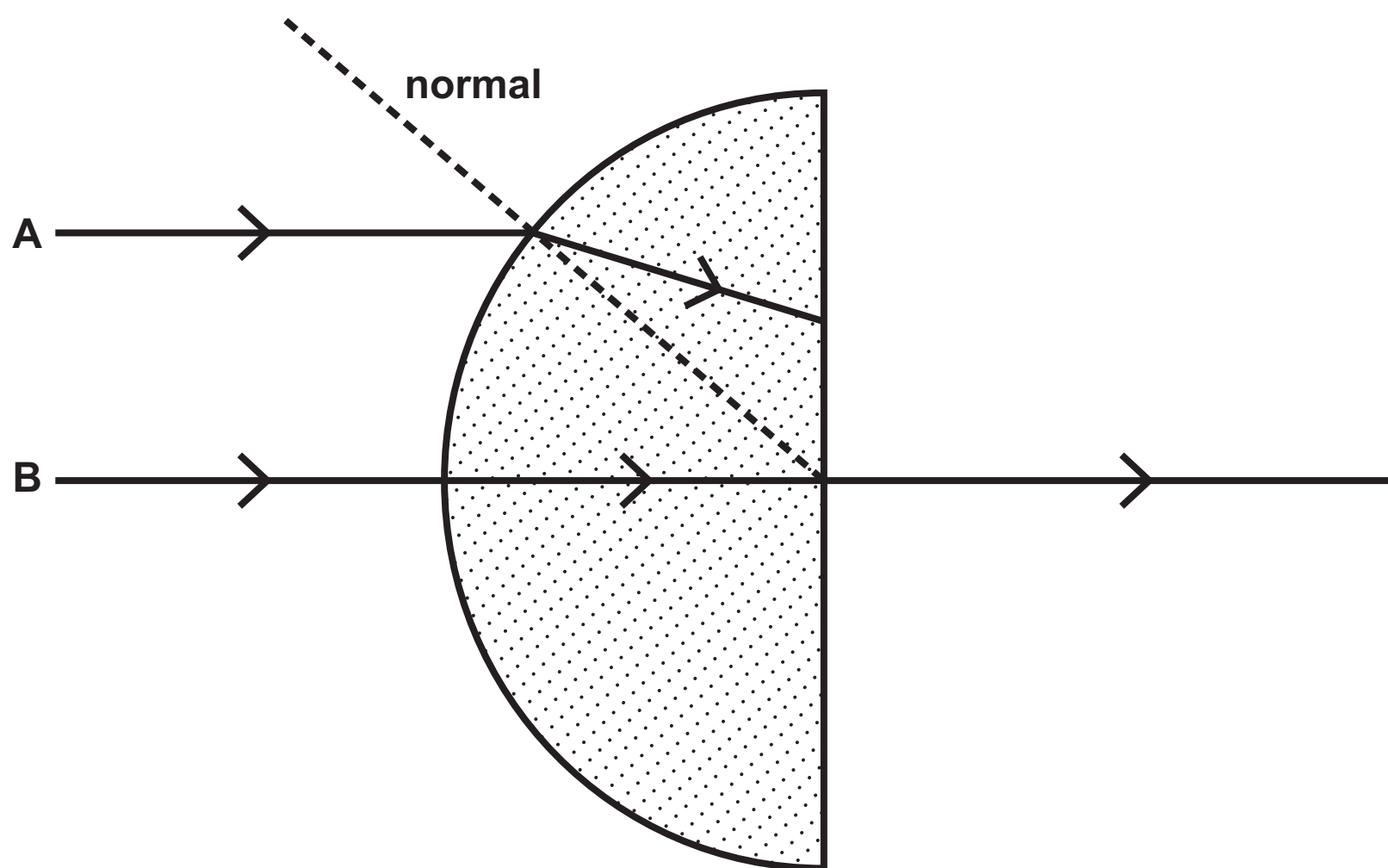
Question 3(b)



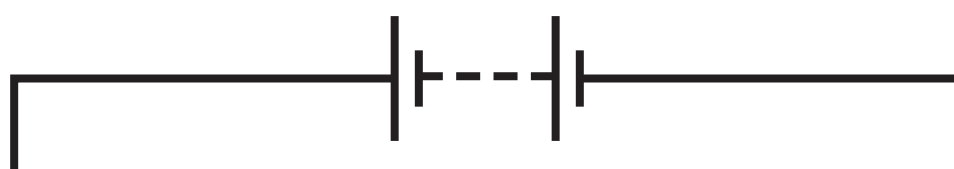
Question 4(a)

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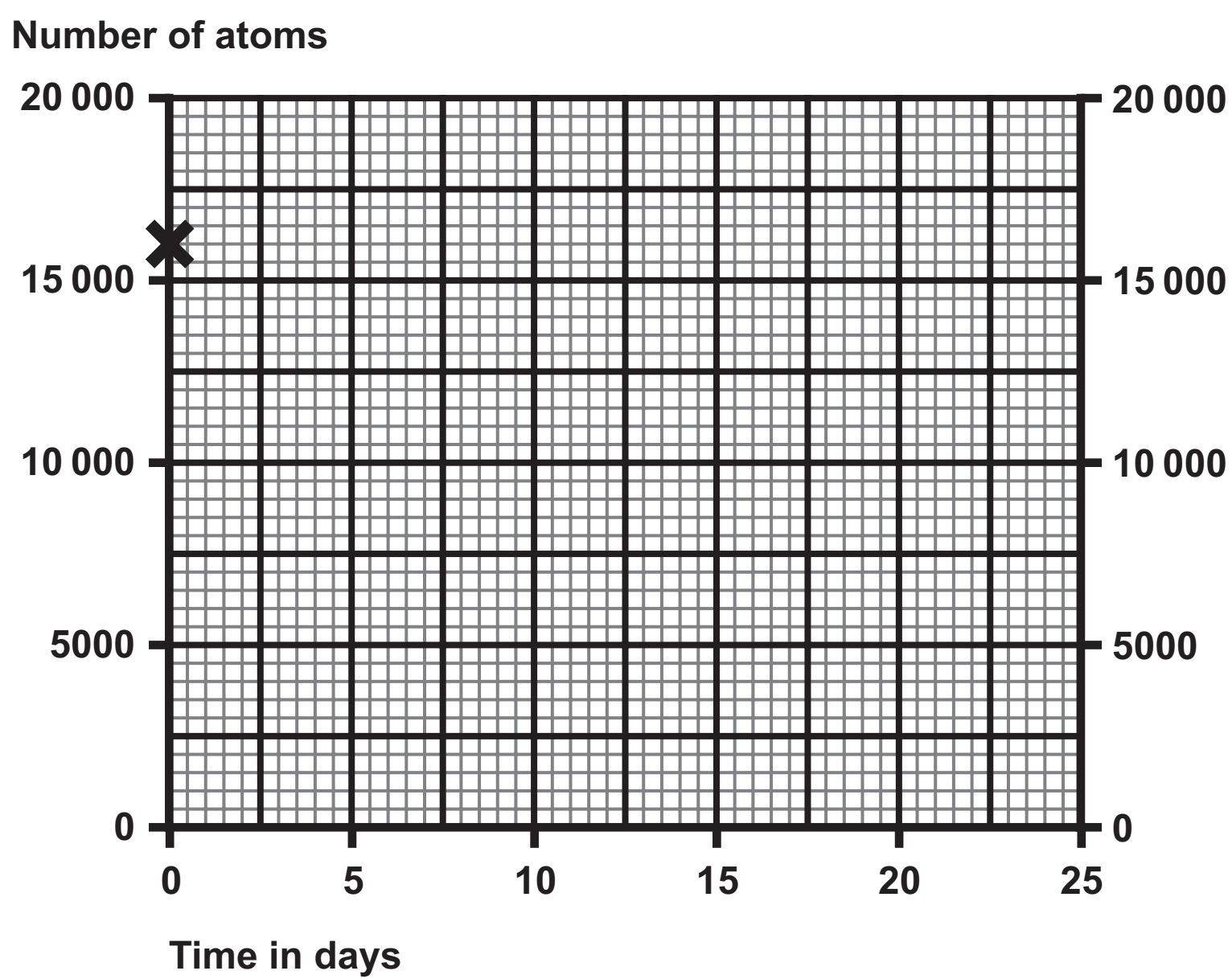
Question 6



Question 7(a)

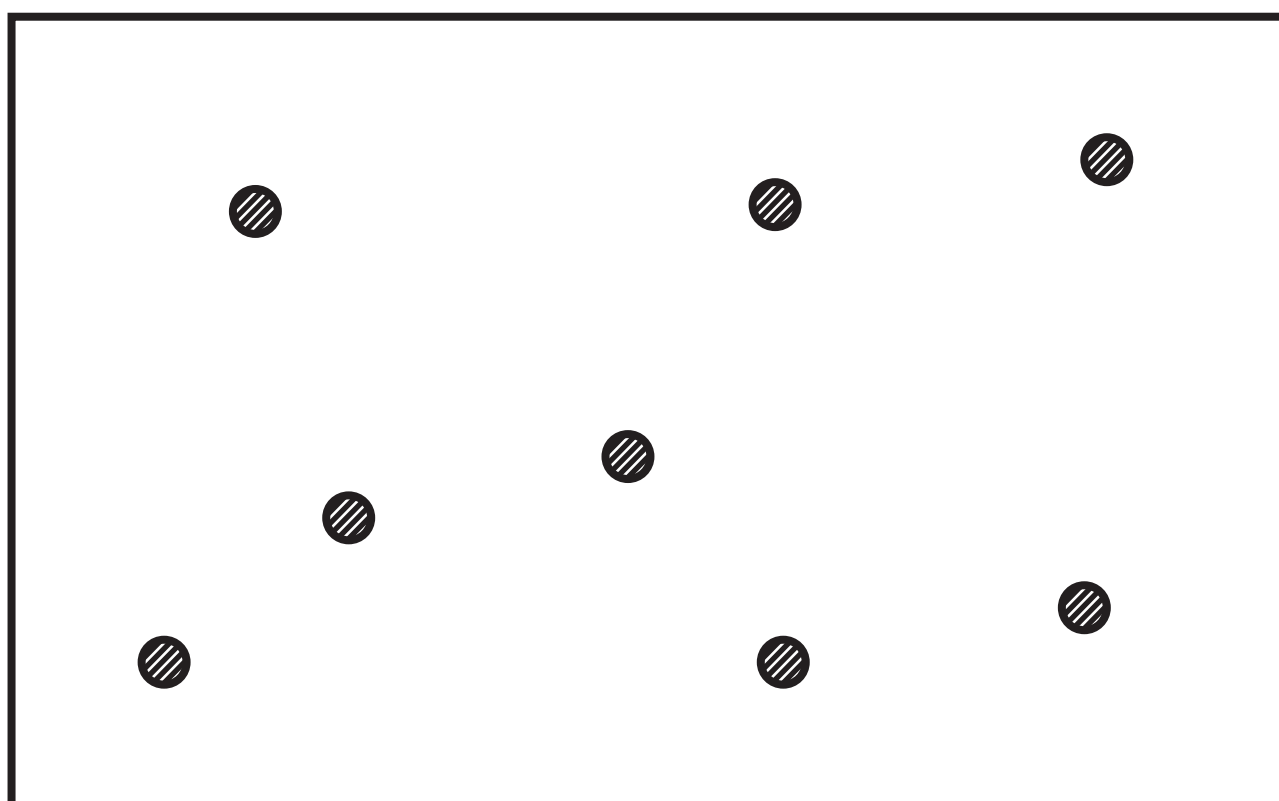


Question 8(a)(iii)



Question 11(a)

DIAGRAM 1



Question 2

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Question 5

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