



Rewarding Learning

General Certificate of Secondary Education
2022

Centre Number

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Candidate Number

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Double Award Science

Physics

Unit 7: Practical Skills

Booklet A

Foundation Tier

[GDW71]

TIME

1 hour.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all** parts of Question 1.

INFORMATION FOR CANDIDATES

The total mark for this paper is **15**.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Follow all health and safety instructions.

You may use a ruler and calculator if required.

The apparatus and materials required to complete the task(s) are provided.

For Examiner's
use only

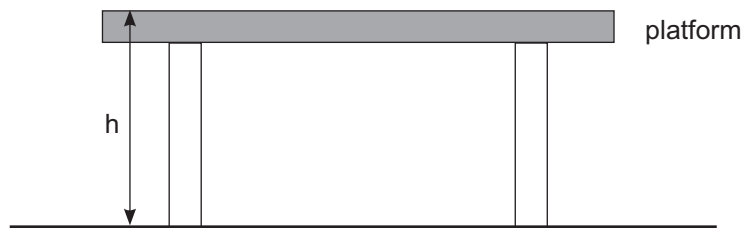
Question Number	Marks
1	

Total Marks	
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- 1 In this experiment you are going to measure the personal power of a student.

During the experiment a student will step onto a raised platform a number of times.



Source: Chief Examiner

You may carry out this experiment in a group of up to three students.

- (a) (i)** Measure the height, h , of the platform in mm.

Height, h , of platform = _____ mm [1]

- (ii) Express your answer in m.

Give your answer to two decimal places.

Height = _____ m [1]

- (iii) Measure and record the time taken for the student to complete 30 step-ups.

Note: a step-up means having both feet on the platform.

Time for 30 step-ups = _____ s [1]

- (iv)** Measure the mass of the student who stepped onto the platform.

Record the mass to the nearest kg.

Mass = _____ kg [1]

You must complete the remainder of the paper on your own.

(b) (i) Use your answer to (a)(iv) to calculate the weight of the student.

You are advised to show your working out.

Weight = _____ N [2]

(ii) In a particular experiment the vertical height of the platform was 0.2m and the student did 30 step-ups.
Calculate the total vertical distance the student lifts their weight.

Total vertical distance = _____ m [1]

(iii) Which of the following equations could be used to calculate the power produced by the student?

Choose from A, B, and C.

A Power = (mass $\times$ total vertical distance)/time

B Power = (mass $\times$ 10 $\times$ total vertical distance)/time

C Power = (total vertical distance $\times$ 10)/time

Letter _____ [1]

Examiner Only	
Marks	Remark
	

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