

(d) It is suggested that the relationship between x , h and s is

$$kx = \sqrt{hs}$$

where k is a constant.

(i) Using your data, calculate two values of k .

first value of k =

second value of k =

[1]

(ii) Justify the number of significant figures that you have given for your values of k .

.....

.....

..... [1]

(e) It is suggested that the percentage uncertainty in the values of k is 20%.

Using this uncertainty, explain whether your results support the relationship in (d).

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.....

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..... [1]

(f) (i) Describe **four** sources of uncertainty or limitations of the procedure for this experiment.

For any uncertainties in measurement that you describe, you should state the quantity being measured and a reason for the uncertainty.

1

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2

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3

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4

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[4]

(ii) Describe **four** improvements that could be made to this experiment. You may suggest the use of other apparatus or different procedures.

1

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2

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3

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4

.....

[4]

[Total: 20]

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