
This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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(a)

[3]

3

It is now given that $\mu = \frac{1}{2}$.

- (b)** Find the extension of the string when the particle comes to rest. [3]

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- (a)**

$$\frac{-2dk}{4},$$

[5]

The particle P is pulled vertically upwards so that $BP = 18a$, and is then released from rest. In its subsequent motion, P first comes to instantaneous rest at the point where $BP = 8a$.

(b) Find the value of k .

[4]

[illegible]

- 5

[6]

7

- 2

(a)

[5]

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(b)

Find, in terms of m and g , the magnitude of the frictional force in this position.

[3]

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