

- 4 A spring hangs vertically from a point P, as shown in Fig. 4.1.

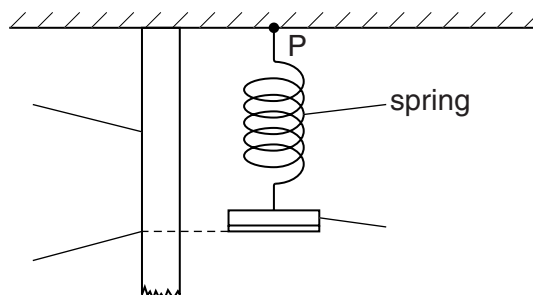


Fig. 4.1

A mass M is attached to the lower end of the spring. The reading x from the metre rule is taken, as shown in Fig. 4.1. Fig. 4.2 shows the relationship between x and M .

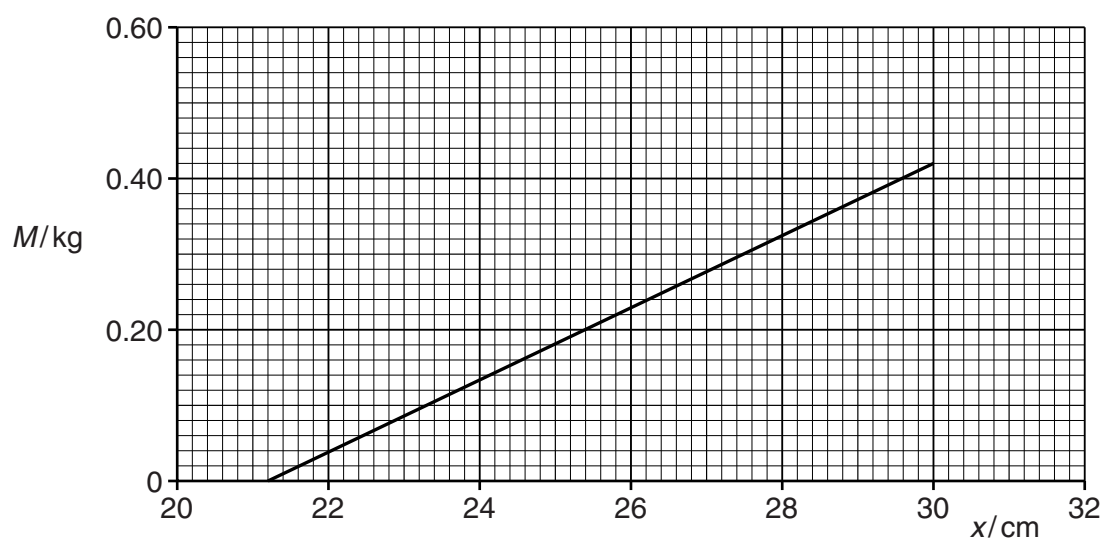


Fig. 4.2

- (a) Explain how the apparatus in Fig. 4.1 may be used to determine the load on the spring at the elastic limit.

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- (b) State and explain whether Fig. 4.2 suggests that the spring obeys Hooke's law.

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(c) Fig. 4.2 to determine the spring constant, in N m^{-1} , of the spring.

spring constant = N m^{-1} [3]