

- (b) Clamp the half metre rule or metre rule such that the millimeter scale is close to the tip of the pin. See figure 1. Note the reading  $y_1$ , the initial position of the pointer.

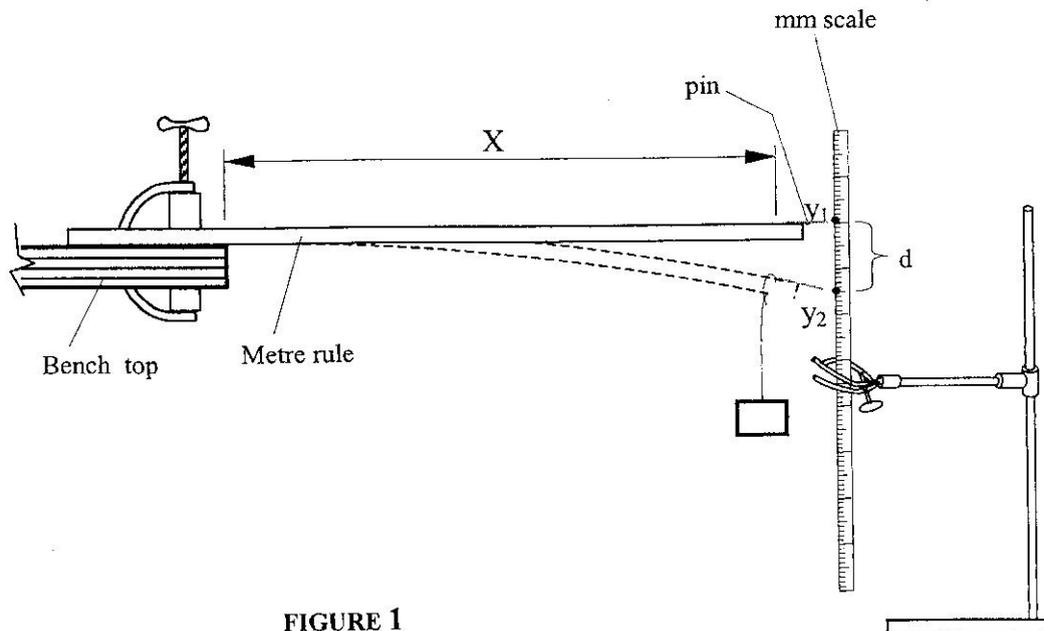


FIGURE 1

- (c) Hang with a loop of thread, a 100 g mass at a point 5 cm from the end of the metre rule. Note  $y_2$ , the reading on the scale corresponding to the new position of the pointer. Determine the depression  $d = y_1 - y_2$  (always taken as positive). **The distance  $X$  between the edge of the bench and the position of the mass is now 85 cm (90 cm – 5 cm).** Record these values in Table 1.
- (d) Repeat the procedure in (c) for other values of  $X$  shown in the table. Complete the table.

X (cm)	$y_1$ (cm)	$y_2$ (cm)	d (cm)
85			
80			
75			
70			
65			
60			
55			
50			

Table 1

(7 marks)