سؤال 9

غير مجاب عليه بعد

الدرجة من 1.00

علِّم هذا السؤال

In a wire, when elongation is 2 cm energy stored is E. if it is stretched by 10 cm, then the energy stored will be

a. 25 E

b. 2 E

c. 4 E

d. E

أخلِ اختياري

علم هذا السؤال

One end of a steel wire of area of cross-section 3 mm^2 is attached to the ceiling of an elevator moving up with an acceleration of 2.2 m/s^2. if a load of 8 kg is attached at its free end, then the stress developed in the wire will be

a. $20 \times 10^6\ N/m^2$
b. $8 \times 10^6\ N/m^2$
c. $32 \times 106\ N/m^2$
d. $16 \times 10^6\ N/m^2$

أخلِ اختياري

Shearing strain is expressed by

angle of shear .a

decrease in volume .b

increase in volume .c

angle of twist .d

الوقت المتبقي 0:14:14

A metal bar of 10 mm diameter when subjected to a pull of 23.5 kN gave an elongation of 0.3 mm on a gauge length of 200 mm. The Young's modulus of elasticity of the metal will nearly be

.a kN/mm^2 200

.b kN/mm^2 360

.c kN/mm^2 300

.d kN/mm^2 400

علم هذا السؤال

A rubber cord of cross sectional area 1 mm^2 and unstretched length 10 cm is stretched to 12 cm and then released to project a stone of mass 5 gram. If Y for rubber = 5×10^8 N/m^2, then the tension in the rubber cord is

.a 50 N ○

.b 100 N

.c 25 N ○

.d 200 N ○

The magnitude of the force developed by raising the temperature from 0°C to 100°C of the iron bar of 1.00 m long and 1 cm^2 cross-section when it is held so that it is not permitted to expand or bend is (Temperature Co-efficient = 10^{-5}/°C and Y = 10^{11} N/m^2)

a. 10^9 N ○

b. 10^3 N ○

c. 10^5 N ○

d. 10^4 N ○

علِّم هذا السؤال

Which of the following elastic moduli is used to describe the elastic behaviour of object as they respond to the deforming forces acting on them?

a. Shear modulus

b. Young's modulus

c. Bulk modulus

d. All of these

سؤال 1

غير مجاب عليه بعد

الدرجة من 1.00

علِّم هذا السؤال

A metal bar 5.0 m long extends by 0.05 mm when a tensile load is applied to it. The percentage strain is:

a. 0.001

b. 0.01

c. 0.0001

d. 0.1

علّم هذا السؤال

Two wires A and B are of the same length. The diameters are in the ratio 1 : 2 and the Youngs modulus are in ratio 2 : 1. if they are pulled by the same force, then their elongations will be in ratio

a. 1 : 4

b. 4 : 1

c. 2 : 1

d. 1 : 2

Two wires have the same material and length, but their masses are in the ration of 4 : 3.

If they are stretched by the same force, their elongations will be in the ratio of

9 : 16 .a ○

4 : 3 .b ○

2 : 3 .c ○

3 : 4 .d ○

الوقت المتبقي 0:25:56

are subjected to same tensile
have their axial elongation in
the ratio of 4:6, then the ratio of modulus of
elasticity of the two materials would be

a. $2 : \sqrt{6}$

b. $4 : 6$

c. $6 : 4$

d. $\sqrt{6} : 2$

أخلِ اختياري