**Problems Chapter 12**





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Old exams

**One end of a plastic rope, of length 45.0 m and radius 3.50 mm, is fixed to a ceiling while the other end is free. Its length increases by 1.10 m when a mass of 65.0 kg is attached to its free end. What is Young’s modulus for plastic? (6.78×108 N/m2)**

**What increase in pressure is necessary to decrease the volume of a sphere by 0.23%? Take the bulk modulus of the sphere B = 2.8×1010 N/m2 . (6.4×107 N/m2)**

**What is the applied pressure to a solid copper cube in order to reduce its volume to 40 % of the original volume? The bulk modulus of copper is 1.4×1011 N/m2. (8.4×1010 N/m2)**