Answer Tutorial 6 - Chapter 2: Mechanics of material

Problem No.	Answers	Problem No.	Answer
01	1988.4 N	07	a) Deflection at E = 80.34 μm b) Deflection at F = 208.93 μm c) Deflection at G = 389.66 μm
02	71.15 MPa (compressive)	08	a) R_E=37.2 kN (Leftward) R_A=62.8 kN (Leftward) b) Deflection at point C = 46.3 **μ**m (Rightward)
03	a) R_C=9.41 kN R_D=34.89 kN b) Deflection at point A = 1.07 mm	09	σ_{BC}=112 MPa (Tensile) σ_{AC}=224 MPa (Tensile) (Note: The strain in section AC and BC is different. The problem is statistically indeterminate)
04	a) 93.8 cm b) 5880 mm^2	10	44.8 MPa (Compressive)
05	2.9 cm	11	σ_{Steel}=84.142 kPa (Compressive) $\sigma_{Concrete}$=2.54 kPa (Tensile)
06	a) Deformation of BD = 1.94 mm b) Deformation of DE = 3.24 mm	12	3.67 MPa (Tensile)