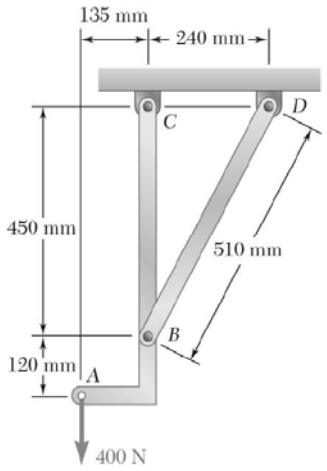
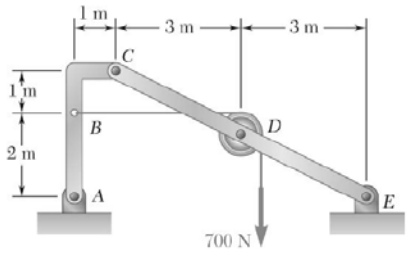


PROBLEM 6.76

Determine the force in member BD and the components of the reaction at C.

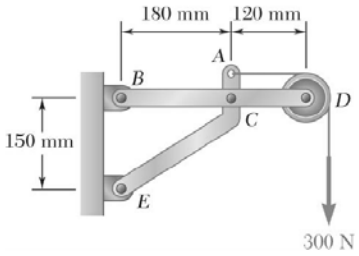
Ans. $F_{BD} = 255$ N (C), $C_x = 120$ N →, $C_y = 625$ N ↑



PROBLEM 6.93

Knowing that the pulley has a radius of 0.5 m, determine the components of the reactions at A and E.

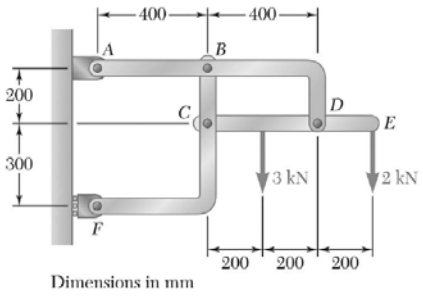
Ans. $E_y = 450$ N ↑, $A_y = 250$ N ↑, $A_x = 150$ N←, $E_x = 150$ N →



PROBLEM 6.94

Knowing that the pulley has a radius of 50 mm, determine the components of the reactions at B and E.

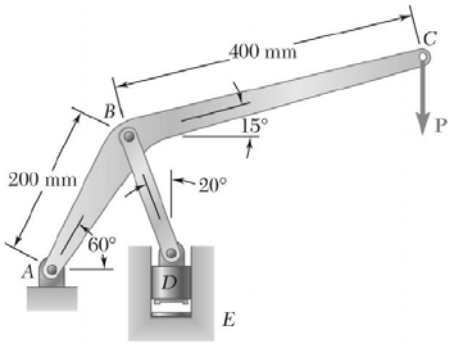
Ans. $B_x = 700$ N ←, $E_x = 700$ N →, $E_y = 500$ N ↑, $B_y = 200$ N↓



PROBLEM 6.105

For the frame and loading shown, determine the components of all forces acting on member *ABD*.

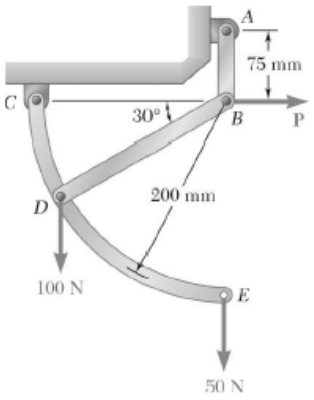
Ans. $F = 7.6$ kN →, $A_x = 7.6$ kN←, $A_y = 5.0$ kN ↑, $B_x = 11.4$ kN ←, $B_y = 0.5$ kN ↓, $D_x = 19.0$ kN →, $D_y = 4.5$ kN ↓



PROBLEM 6.123

The press shown is used to emboss a small seal at E. Knowing that $P = 250$ N, determine (a) the vertical component of the force exerted on the seal, (b) the reaction at A.

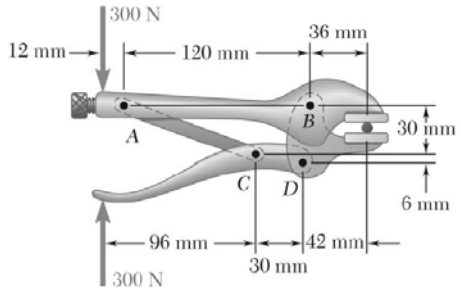
Ans. $E = 746$ N ↓, $A = 565$ N ◹ 61.3°



PROBLEM 6.128

For the system and loading shown, determine (*a*) the force **P** required for equilibrium, (*b*) the corresponding force in member *BD*, (*c*) the corresponding reaction at *C*.

Ans. $P = 109.8$ N →, $C = 139.8$ N ◺ 38.3°, $F_{BD} = 126.8$ N (T)



PROBLEM 6.145

Determine the magnitude of the gripping forces produced when two 300-N forces are applied as shown.

Ans. $F = 8.45$ kN