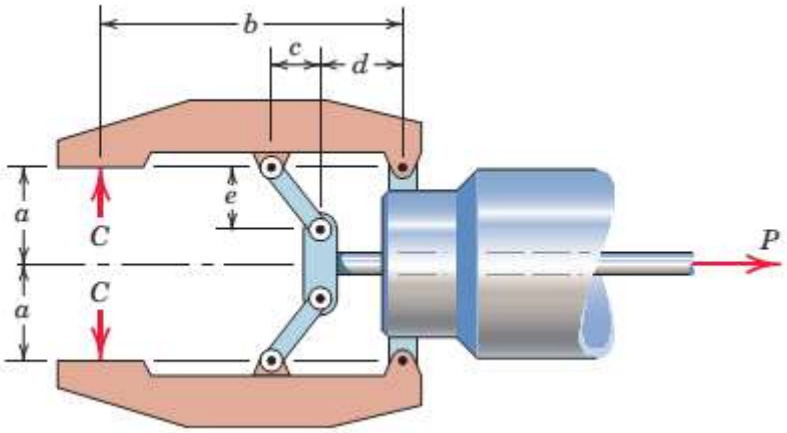
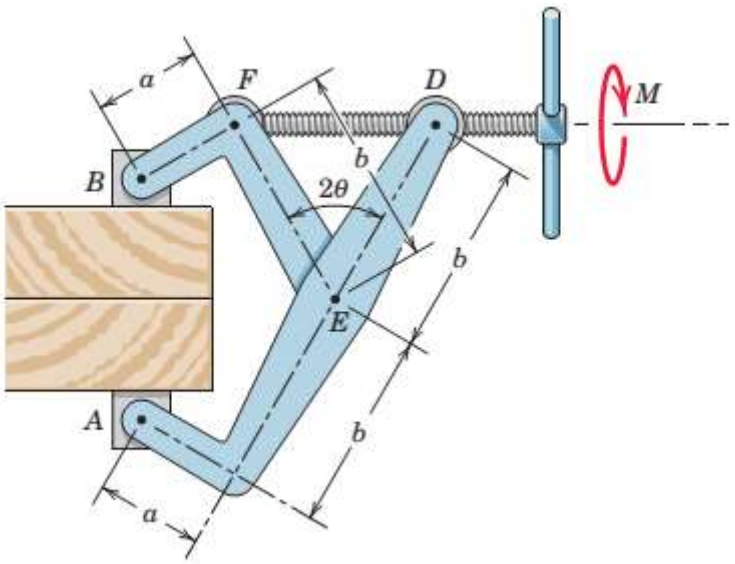
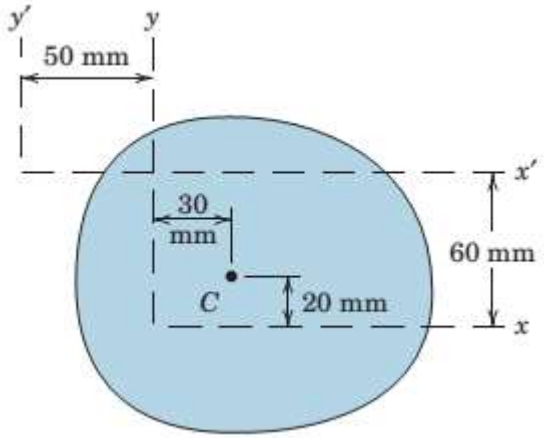
Problem 1. In the design of the claw for the remote-action actuator, a clamping force *C* is developed as a result of the tension *P* in the control rod. Express *C* in terms of *P* for the configuration shown, where the jaws are parallel.



Problem 2. Determine the force *F* between the jaws of the clamp in terms of a torque *M* exerted on the handle of the adjusting screw. The screw has a lead (advancement per revolution) *L*, and friction is to be neglected.



Problem 3. The products of inertia of the shaded area with respect to the *x-y* and *x'-y'* axes are $8(10^6)$ mm^4 and $-42(10^6)$ mm^4, respectively. Compute the area of the figure, whose centroid is *C*.



Problem 4. Determine the product of inertia of the shaded area about the *x-y* axes.