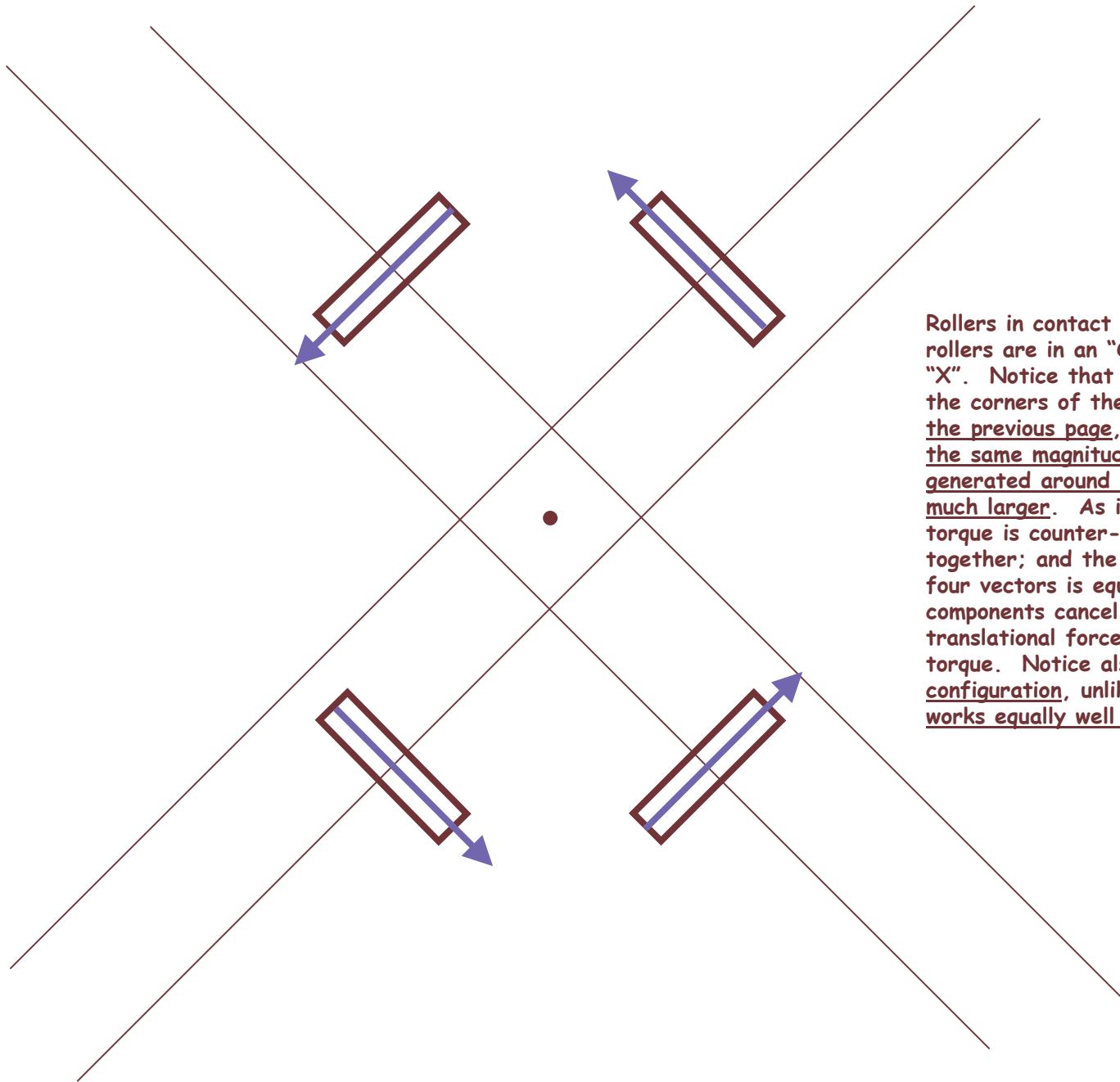


Rollers in contact with floor shown. When located at the corners of a rectangle, each of the four force vectors creates a yaw torque around the common center. In this case, each torque is counter-clockwise and they all add together. Notice that in this case, the magnitude of each of the four vectors is equal, and all the X and Y components cancel out, so there is no net translational force - only a pure rotational torque.



Rollers in contact with floor shown. Now the rollers are in an "O" configuration instead of "X". Notice that the rollers are located at the corners of the exact same rectangle as the previous page, and the force vectors are the same magnitude, but the torques generated around the common center are much larger. As in the previous page, each torque is counter-clockwise and they all add together; and the magnitude of each of the four vectors is equal, and all the X and Y components cancel out, so there is no net translational force - only a pure rotational torque. Notice also that the "O" configuration, unlike the "X" configuration, works equally well with a square.