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For the kinetic energy of rotation we know that

$$K = \sum \frac{1}{2} m_i (\omega r_i)^2$$

where, m_i defines the weight of i th particle of a object and r_i defines the distance between the axis of rotation and i th particle.

But here we don't have ' ω_i ' because if an object is rotating in a circular path then all the particle of that object have same angular velocity. No matter, how far it is from the axis of rotation. The angular velocity is same throug out the object. Therefore we don't use ' ω_i ' here.