

The Figure below shows that two gears with teeth on their outer edges act like a first class lever when one gear drives the other. This would actually be called a fractional disadvantage because there would be less force out than force in. The mechanical advantage in terms of distance (rpm in this case) would be $12 / 9$, or 1.33 . The mechanical advantage in terms of force would be the effort arm divided by the resistance arm, or $9 / 12$, which is 0.75 .