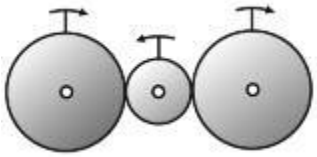
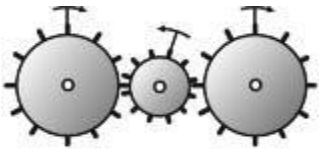
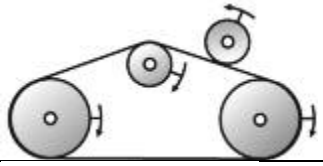
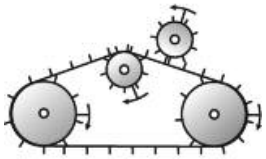
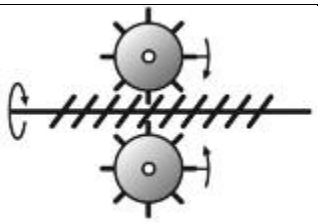
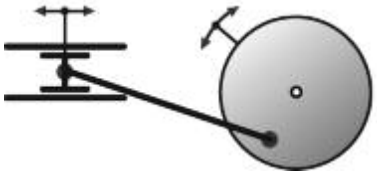
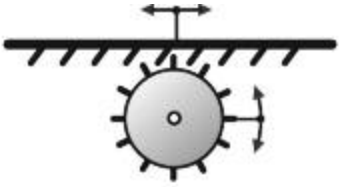
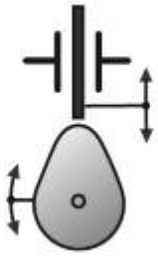
# MOTION TRANSMISSION

In a motion transmission system, motion is relayed from one part to another **without** changing the nature of the motion.

| Motion Transmission System | Representation | Function Components |
|---|---|---|
| A friction gear system |  | One or more wheels without teeth roll together. |
| A simple gear system |  | Two or more gears come into contact; they mesh. |
| A pulley and belt system |  | A belt slides on two or more wheels, which are referred to as pulleys. |
| A chain and sprocket system |  | Has two or more sprockets that do not touch, plus a chain |
| Worm and worm gear system |  | Has a worm and a worm gear. The teeth of the worm slide into the groove of the worm gear thread. |

# MOTION TRANSFORMATION

A motion transformation system transfers the nature of a motion as it is relayed from one part to another.

| Motion Transformation System | Representation | Function Components |
|---|---|---|
| A slider-crank system |  | The motion of the crank is transmitted to the connecting rod, which transforms it into a translational motion before transmitting it to another part. |
| A rack and pinion system |  | Has a straight rod with teeth called a rack, and a gear called a pinion. The motion is transformed by the meshing of the teeth. |
| A cam and follower system |  | An irregularly shaped disk and a rod called a follower. When the cam turns, the follower makes a reciprocating translational motion (it goes up, then down). |
| A screw gear system Type 1 |  | In some systems, the nut is the driver and the screw transforms its rotational motion into translational motion. In others, the screw is the driver. |