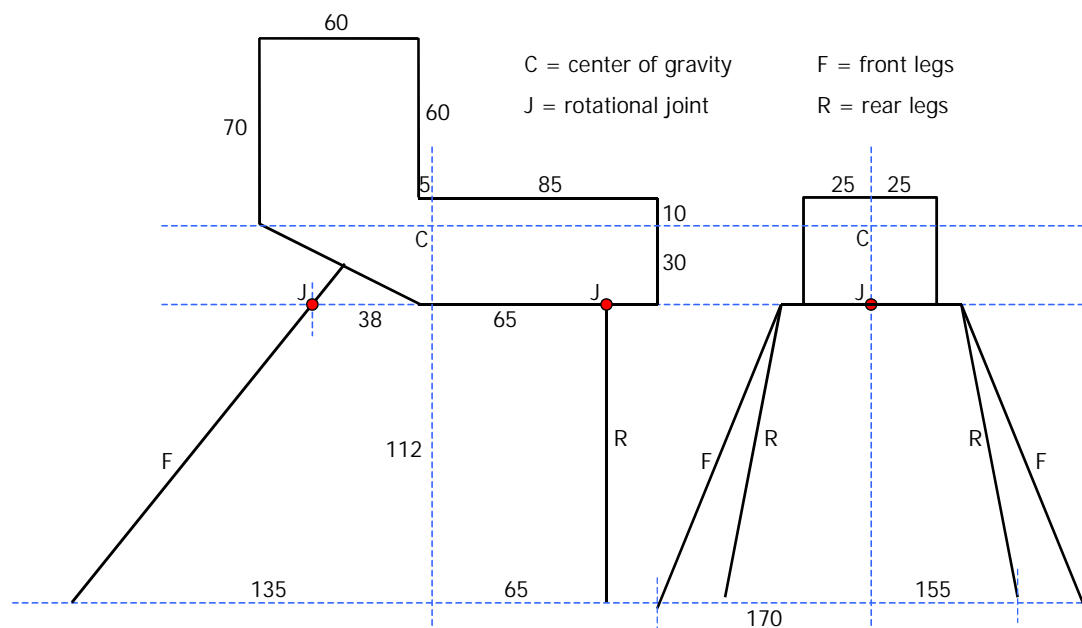


## Evolving Walking Robots: Model of Lucy (without Head)

See below the model of walking robot Lucy. She has two degrees of freedom – one for the two front legs, and one for the two rear legs. When seen from above (not shown here) each pair of legs is:

- fully turned counterclockwise if the corresponding motor neuron is  $-1$ ,
- perpendicular to Lucy's middle axis if the neuron is  $0$ , and
- fully turned clockwise if it is  $1$ .

If the motor neuron is  $-1$  or  $1$ , then the pair of legs is in line with Lucy's middle axis, thus, perpendicular to the position when the neuron is  $0$ .



All measures are in millimeters. The overall body mass of Lucy is  $m_{\text{body}}=0,27\text{kg}$ .

**Note:** The driving motors have a limited torque of approximately  $3,0\text{kg}/0,19\text{sec}$ .

**Note:** Although the tilt angle of the front legs' driving motor is  $30^\circ$ , the actual angle when using the above measurements calculates to  $41^\circ$ . This is due to the soft bending of the front legs from joint to floor.