ESQUEMA 7.MECHANISMS

- MECHANISMS
  - LINEAR TRANSMISSION
    - LEVERS
      - LAW OF LEVEL: Lever Is In Equilibrium: F.D=R.R
      - CLASS 1: R – A - F
      - CLASS 2: A – R - F
      - CLASS 3: A – F - R
    - PULLEYS
      - WHEEL with a GROOVE that turn on an axis.
      - FIXED PULLEY: balanced when F=R
      - MOVABLE PULLEY: one FIXED, another LINEAR movement.
      - F=R/2
      - COMPOUND PULLEY SYSTEM
        - Special combinarion of FIXED and MOVABLE pulleys
        - F=R/2.n (FACTORIAL)
        - $F=R/2^n$ (EXPONENCIAL)
  - ROTARY TRANSMISSION
    - WHEELS AND BELTS
      - 2 or more WHEELS in contact DIRECTLY or with a BELT
      - $D_2/D_1 = N_1/N_2$
      - FRICTION WHEELS (in contact)
        - IN CONTACT
        - DRIVER / DRIVEN
      - PULLEYS WITH BELTS (distance)
        - TURN IN THE SAME DIRECTION
    - INTERLOCKING GEARS
      - $Z_2/Z_1 = N_1/N_2$
      - WHEELS WITH TEETH
      - Teeth same shape and size
      - Turns in a DIFFERENT direction
    - SPROCKET WITH CHAIN
      - DISTANCE from each other
      - Turn in the SAME direction
  - TRANSFORMATION OF MOTION
    - WINCH AND CRANK MECHANISM
      - F.d=R.r
      - Less force toTURN the WINCH with a CRANK
      - PINION= WHEEL with TEETH
    - RACK AND PINION MECHANISM
      - RACK= a BAR with TEETH
      - Transform ROTARY movement into LINEAR MOTION
    - CRACK AND ROD MECHANISM
      - CRACK TURNS and MOVES THE ROD
      - WHEEL TURNS and CRANK TRANSFORM ROTARY movement to the ROD and viceversa