REVISION GUIDE

Mechanics Formula Sheet

A fuller mechanics sheet covering force, work, power, momentum, and energy with unit discipline and interpretation reminders.

QUICK OVERVIEW

Category: physics

Includes 3 related guide pages.

Links back to 9 calculator tools.

FORMULA HIGHLIGHTS

Force
F = m x a

Momentum
p = m x v

MECHANICS MAP

Use this pack as a quick way to keep the main mechanics quantities connected: force changes motion, work transfers energy, power describes rate, and momentum and energy capture different aspects of motion.

FORMULA HIGHLIGHTS

- Force: F = ma
- Work: W = Fd (for aligned force and displacement in simple cases)
- Power: P = W / t
- Momentum: p = mv
- Kinetic energy: KE = 0.5mv^2
- Potential energy: PE = mgh

UNIT REMINDERS

- Force -> newtons
- Work and energy -> joules
- Power -> watts
- Momentum -> kg m/s

WORKED EXAMPLES

500 J of work in 10 s corresponds to 50 W average power.

Doubling speed quadruples kinetic energy for the same mass.

QUICK INTERPRETATION CHECKS

- Ask whether the quantity describes amount or rate.
- Check whether the unit matches the physical meaning.
- Use proportional reasoning before trusting exact arithmetic.