The Practise Ground

Classes 9-12 Physics

Solve Any Numerical

The 5-step method for physics problems

1 Write what is given

Step 1: list the knowns and the unknown

Include the unit with every number

2 Pick the formula

Step 2: find the equation that links them

Use the quantity that is not given or asked for as a guide

3 Convert to SI units

Step 3: metre, kilogram, second, ampere

km/h to m/s: ×5/18. g to kg: ÷1000. cm to m: ÷100

4 Substitute and solve

Step 4: put in the numbers, then calculate

Keep the units in every line of working

5 Check the answer

Step 5: unit, sign and size

Is a car's speed 5000 m/s? Then something is wrong

Formulas to remember

$F = ma$, $v = u + at$, $P = W/t$

$V = IR$, $\rho = m/V$, $P = F/A$

Quick example

A 5 kg trolley accelerates at 4 m/s^2.

$F = ma = 5 \times 4 = 20$ N

Think you've got it? Test yourself.

Scan for the free practice pack with answers.

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