

Chapter 1

Introduction

What physics is about. All physics is wrong. Not using calculus. Concepts. Depth. Pre-requisites. Circularity.

Part I

kinematics

Chapter 2

Numbers

Chapter 3

Space (Distance)

Volume. Area. Area of a circle (without calculus). Volume of a sphere. Pi. Pick's Theorem (in the extras). Pythagoras's theorem. Working out some distances.

Chapter 4

Angles

Meaning of an angle. Radians [other measures, degrees etc]. Solid angles.

Chapter 5

Time

Chapter 6

Dimensions

Chapter 7

Change: Speed etc

Jerk. Jounce. [snap, crackle, pop] Look forward: differential calculus.

Part II

Dynamics

Chapter 8

Introduction

Chapter 9

Equations

Chapter 10

Momentum

Chapter 11

Force

Pressure. Gravity. Electrostatics. Springs.

Chapter 12

Mass

Chapter 13

Work

Part III

Thermodynamics

Chapter 14

Temperature

Chapter 15

Heat

Chapter 16

Energy

Chapter 17

Entropy

Why things go. Melting of ice.

Chapter 18

Heat Engines