

AP Physics C Mechanics Outline

Topic	Classwork	Homework
1-d kinematics: equations + graphs	MC 1998 # 3 HRW6 p. 28 21P	
2-d kinematics and vector calculus	MC 1998 # 29 HRW6 p. 67 11E, 13P	MC 1998 # 2, 26
Forces	MC 1998 # 4	
Calculus: Exponential functions	Cribsheet: Logs and exponentials Hand draw plot of derivative for e^x Stewart p. 426 # 30, 36	Stewart p. 426 # 29, 39
Calculus: Logarithmic functions Hand draw derivative function for $\ln x $	Stewart p. 443 # 8, 20; 68	Stewart p. 443 # 7, 11; 69
Calculus: u -substitution	Cribsheet: FToC Stewart p. 428 # 72 Stewart p. 443 # 67	Stewart p. 428 # 75 Stewart p. 443 # 71
Drag forces	FRQ 2008 M1	FRQ 2010 M1
Forces with circular motion		FRQ 2005 M2 MC 1998 # 25
Impulse/momentum	MC 1998 # 31 Rocket problem	FRQ 1997 M2
Center of mass (1) 6.1 Center of mass cribsheet 6.2 Mass-averaging over continuous mass distributions	HRW6 p. 188 5E, 15P	HRW6 p. 189 12E (The net force on the balloon-people system is zero)
Work/energy/potential energy, springs 2.1 Vectors for AP Phy C: \cdot product 7.1.2 Work done along a path (1) 5.0 Newt 2 can be re-expressed Adapt for two masses gravitationally attracted 7.2.2 Potential energy landscapes (1) 3.3 Spring force (1) 7.2.1 Potential energy	FRQ 2002 M3	FRQ 2008 M3 FRQ 2009 M1 MC 1998 # 16, 17; 27
Rotational 2.1 Vectors for AP Phy C: \times product 8.1 Rotational kinematics and dynamics cribsheet 8.2 Torque concept	MC 1998 # 30 FRQ 1999 M3	FRQ 2004 M2 FRQ 2013 M3
SHM 10.1 SHM Graphs 10.2 SHM cribsheet 10.3 SHM Ignoring gravity	FRQ 1999 M2	FRQ 2011 M3 FRQ 2000 M1