AP PHYSICS ASSIGNMENT SHEET: UNIT 1 - KINEMATICS

MR. DARLINGTON

Topic (Percent of AP Exam)	*Reading HW*	*HW Problems*			
1. INTRODUCTION (7%)		*Chapter 1*			
1.1 The Nature of Science	**1.1**	**page 16**			
1.2 Physics and its Relation to other Fields	**1.2**	**12**			
*Introduction of Physics, its importance and scope		**13**			
1.5 Units, Standards and the SI System	**1.5**	**22**			
Description of the SI system					
*Description of base and derived quantities					
1.6 Converting Units	**1.6**				
*Practice of unit conversion					
2. DESCRIBING MOTION: KINEMATICS IN ONE DIMENSION (% INCLUDED IN INTRO)		*Chapter 2*			
2.1 Reference Frames and Displacement	**2.1**	**page 39**	**page 41**		
*Description of a frame of reference		**7**	**47**		**2 WEEKS**
*Definition of displacement		**9**	**50**		
2.2 Average Velocity	**2.2**	**11**	**51**		
2.3 Instantaneous Velocity	**2.3**	**13**	**54**		
*Definition of average and instantaneous velocity		**14**			
2.4 Acceleration	**2.4**	**page 40**			
*Definition of acceleration and discussion of direction of acceleration		**18**			
2.5 Motion at Constant Acceleration	**2.5**	**20**			
2.6 Solving Problems	**2.6**	**27**			
2.7 Falling Objects	**2.7**	**36**			
*Use the kinematic equations to solve problems involving free fall by		**37**			
using the value of the acceleration due to gravity		**38**			
2.8 Graphical Analysis of Motion	**2.8**	**39**			
*Graphs of position versus time		**42**			
*Graphs of velocity versus time					
*Calculation of slope and area under the curve for various motion graphs					
3. KINEMATICS IN TWO DIMENSIONS, VECTORS (% INCLUDED IN INTRO)		*Chapter 3*			
3.1 Vectors and Scalars	**3.1**	**page 66**	**page 67**	**page 68**	
*Distinguish between vectors and scalars		**10**	**27**	**39**	
3.2 Addition of Vectors: Graphical Methods	**3.2**	**18**	**30**	**41**	
*Addition of two vectors along the same line		**19**	**31**	**45**	
*Addition of two vectors at right angles to one another		**21**	**32**		
*Parallelogram method and Polygon method		**23**			**1 WEEK**
3.4 Adding Vectors by Components	**3.4**				
*Component method of vector Addition					
3.5 Projectile Motion	**3.5**				
*Definition of projectile motion and its characteristics					
*Solving problems of projectiles fired horizontally and at an angle					

KINEMATICS EXAM AND PROBLEM SET DUE DATE: FRIDAY, SEPTEMBER 28, 2007