AP PHYSICS ASSIGNMENT SHEET: UNIT 8 - MAGNETISM

MR. DARLINGTON

Topic (Percent of AP Exam)	*Reading*	*HW Problems*		
IV. ELECTRICITY AND MAGNETISM (25%) [C3]				
20. MAGNETISM (4%) [C3]		*Chapter 20*		
20.1 Magnets and Magnetic Fields	**20.1**	**page 578**	**page 581**	
*A magnet, its magnetic poles and the magnetic fields created by magnets are described.		**11**	**73**	
20.2 Electric Currents Produce Magnetism		**12**	**page 582**	
20.3 Force on an Electric Current in a Magnetic Field	**20.2**	**15**	**75**	
*Definition of magnetic field	**20.3**	**21**		
*Right Hand rule to determine field direction		**27**		**1 WEEK**
*Equation to calculate the force on a current carrying wire		**28**		
20.4 Force on an Electric Charge Moving in a Magnetic Field		**29**		
*Equation to find the force on an electric charge moving in a magnetic field	**20.4**			
20.5 Magnetic Field on a Long Straight Wire				
20.6 Force between Two Parallel Wires	**20.5**			
*Calculate the magnitude and direction of a magnetic field on a long straight wire and between two parallel wires	**20.6**			
21. ELECTROMAGNETIC INDUCTION AND FARADAY'S LAWS (5%) [C3]		*Chapter 21*		
21.1 Induced EMF	**21.1**	**page 610**	**page 612**	
21.2 Faraday's Law of Induction; Lenz's Law	**21.2**	**6**	**30**	
*Description of Faraday's experiments that led to the conclusion that a changing magnetic field induces an emf		**page 611**	**31**	
		12	**35**	
*Statement of Faraday's law of induction		**13**	**36**	**2 WEEKS**
*Statement of Lenz's law		**14**		
21.3 EMF Induced in a Moving Conductor	**21.3**	**15**		
*The expression for the emf induced in a moving conductor is derived		**17**		
21.4 Changing Magnetic Fluxes Produces an Electric Field	**21.4**			
*Equation to calculate the electric field in terms of the magnetic flux density				
21.7 Transformers: Transmission of Power	**21.7**			
*Primary and secondary coils are described				
*The transformer equation is derived				

MAGNETISM, ELECTROMAGNETIC INDUCTION AND FARADAY'S LAWS EXAM AND PROBLEM SET DUE DATE: FRIDAY, FEBRUARY 29