

AP Physics

Checklists and Skills

Skills Needed to Succeed in Honors Physics

1. Determine what concepts are being referenced in a question.
2. Interpret a graph and determine if I need to:
 - A. Read the graph
 - B. Calculate/interpret the slope
 - C. Calculate the area under the curve
3. Solve for any term in an equation; can I do the algebra??
4. Draw a Free Body diagram for any system or object in a system.
5. Design an experiment to answer a specific question
 - A. Determine what data to collect
 - B. How can I analyze/graph this data to answer the question
 - C. Determine any uncertainty/error in the data and what in the experiment may cause the error
6. Explain my answer to a problem in a few short concise sentences or a paragraph.
7. Determine how the result of a problem will change if I increase/decrease a specific variable in the problem

Problem Solving

1. What do I know?
2. What is the 'system'?
3. Can and how will I draw the problem to help me figure this out?
4. What is the question?
5. What topic is this question?
6. Is there one equation used to solve this or will I have to use more than one equation?

Honors Physics Units

Kinematics (August 5 through Sept 16)

1-Dimensional Motion

Kinematics Equations

Graphs: Displacement/time, Velocity/time , Acceleration/time

2-Dimensional Motion

Vectors

Projectiles

Force and Newton's Laws (Sept 16-Oct 20)

Newton's Laws

Free Body Diagrams

Net Force on an Object

Vectors

Tension and Forces on an Object

Inclined Planes

Friction

Energy Work and Power (Oct 21-Nov 18)

Conservation of Energy (KE, PE and Total energy)

Work Concepts and Calculations / Work Energy Theorem

Power Concepts and Calculations

Conservative Forces vs Nonconservative Forces

Linear Momentum (Nov 18- Dec 9)

Impulse and Momentum Calculations

Conservation of Momentum

Elastic vs Inelastic Collisions

Circular Motion and Gravitation (Jan 3-Feb 14)

Torque

Circular Motion Calculations

Vertical Circle

Gravity Calculations

Gravitational Mass vs Inertial Mass

Weight vs Mass

Angular Velocity, Acceleration, Momentum and Kinematics (Feb 15-March 14)

Rotational Kinematics

Simple Harmonic Motion (March 15-March 30)

Pendulums

Springs

Mechanical Waves and Sound (April 10-April 25)

Optics

Wave Speed

Interference

Standing Waves

Beats

Electric Charge, Force and Circuits (April 26-May 17)

Compare/contrast Electric Force and Gravity

Electric Force Calculations

Series vs Parallel Circuits

Combination Circuits

AP Physics Pacing Guide

2018																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Aug	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	
	Kinematics 1 D motion											Kinematics 2 D motion / projectiles																				
Sep	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su		
	Kinematics 2 D motion / projectiles											Force and Newtons Laws																				
Oct	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	
	Force and Newtons Laws											Energy Work and Power																				
Nov	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr		
	Linear Momentum																															
Dec	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	
	2019																															
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Jan	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	
	Circular Motion and Gravity																															
Feb	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	
	Circular Motion and Gravity											Angular Motion																				
Mar	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	
	Angular Motion											Simple Harmonic Motion																				
Apr	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th
	Mechanical Waves and Sound											Electric Charge and Force																				
May	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	
Jun	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	
Jul	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

