

How to Use This AI generated Prompt Set with AI

1. **Copy the entire prompt** into a new chat.
2. The AI will generate **3 AP-style practice problems** with multiple parts.
3. By default, it will show you only the **final answers** (no worked-out solutions).
4. After attempting the problems yourself, type:

“Show me the correct answers and reasoning.”
to see full explanations and step-by-step solutions.

 This mirrors AP exam practice: first you work independently, then you check your reasoning against official-style solutions. Ask questions as they come up.

1.1:

“Provide me with 3 AP-style practice problems on [insert topic]. Each problem should:

Include multiple parts (a), (b), (c).

Be written at AP Physics 1/ C rigor (as appropriate).

Focus on conceptual depth, not just plug-and-chug.

Require students to compare scalar and vector quantities when relevant (e.g., distance vs. displacement, speed vs. velocity).

Involve at least one representation translation (graph, sketch, or vector diagram).

End with a Correctness Checklist summarizing what must be included in a correct answer.

Conclude with: "When you are ready to check yourself, ask: "Show me the correct answers and reasoning.""

Ensure the difficulty and style align with free-response questions from the AP Physics Course and Exam Description."

1.2 -

For more practice, use the AI Prompt:

*"Create 3 AP Physics 1-level practice problems involving motion graphs (position-time, velocity-time, and acceleration-time) based on a humorous real-world or imaginary scenario. Each problem must require a deep understanding of kinematics, not just surface-level recognition. Vary the problems to include a mix of free-response command terms such as **sketch**, **calculate**, **determine**, **justify**, **derive**, or **explain**."*

Additional Requirements for the Problems:

- Scenarios should be funny, creative, or whimsical (e.g., astronauts with pogo sticks, penguins on skateboards, elevators gone rogue).
- At least one problem should involve constant acceleration, one with changing acceleration, and one with piecewise motion.
- Each problem must integrate multiple representations (verbal description → graph → mathematical model).
- Questions should push students to make inferences about slopes, areas, and relationships between graphs (e.g., "Sketch the velocity-time graph given this position-time graph and justify your reasoning").

When you are ready to check your answers, use the prompt:

"Show me what the correct position, velocity, and acceleration graphs would look like, with reasoning for each."

1.3:

Provide me with 3 AP-style practice problems that require students to translate motion into different frames of reference.

- At least one problem should involve motion in **one dimension** and at least one in **two dimensions**.
- Each problem must have multiple parts (a), (b), (c).
- Problems should require conceptual reasoning about relative velocity, displacement, and observations from different observers.
- At least one problem must include a **diagram or graph interpretation**.
- End with a Correctness Checklist summarizing what a complete answer must include.
- Conclude with: "When you are ready to check yourself, ask: "Show me the correct answers and reasoning.""

Ensure the style and difficulty align with free-response questions from the AP Physics Course and Exam Description."