STS Selection 2025-26
AP Physics 2 assignment
due Monday May 19

This assignment is collaborative according to the five-foot rule. You may use the fact sheet, as well as any print or online source that is not AI-generated.

I recommend this simulation to help you visualize ray diagrams.

Draw three beautiful ray diagrams for a converging mirror:

- one for which the object is between the mirror and the focal point
- one for which the object is between the focal point and the center point
- one for which the object is beyond the center point

Draw one beautiful ray diagram for a diverging mirror, with the object anywhere

Draw three beautiful ray diagrams for lenses

- one for a converging lens, with the object between the lens and the focal point
- one for a converging lens, with the object beyond the focal point
- One for a diverging lens, with the object anywhere

Each diagram should take up a full page of unlined paper in landscape form. (If you have to attach a second page, do so. I have 11x17 inch paper in my classroom if you'd like.) Use a straightedge. Use a compass or something circular to draw mirrors. NEATNESS COUNTS! For each diagram do all of the following:

- draw two principal rays
- label the object and the image
- measure with a ruler d_i, d_o, h_i, h_o, and f; indicate the sign of each value with a + or – sign. Briefly justify the sign you chose for each value.
- state whether the image is real or virtual

I'd strongly suggest showing me one of your diagrams for feedback before you move on to the others. I can't help with a blank page, but I'm more than happy to look at what you've attempted and give advice.