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Interactive Physics Illustrations Using Geometer's Sketchpad DALE YODER-SHORT, AAPT — We will show the use of Geometer's Sketchpad to create and use interactive, dynamic physics illustrations that can be run on PC or Mac computers. These sketches allow the user to change input parameters and instantly see output results of a physical situation. For example the user can create a ray diagram for a lens or mirror and then move the object or change the lens focal length. The illustration will immediately show the resulting image. The user can construct a clock which allows the creation of moving objects in an illustration. So, one can construct an illustration of the motion of an accelerated object or of wave motion or of collisions between two objects. Finally one can construct iterative type illustrations such as the motion of a planet in an elliptical orbit. The sketches show what happens as well as calculate relevant output parameters as the input parameters change. The sketches can be used by the teacher to illustrate a concept or by the student in a computer lab or exploration. These sketches can be as simple or complex as the author wants. They can even be constructed by the

student to explore a concept. Geometer's Sketchpad is not difficult to use and a

simple illustration sketch can be constructed in a few minutes.

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