962-C1-506   **Martti E Pesonen*** (`Martti.Pesonen@joensuu.fi`), Martti E. Pesonen, Department of Mathematics, University of Joensuu, Box 111, 80101 Joensuu, Finland. *WWW-documents with interactive animations as learning material.*

Educational research has shown that working with multiple representations of a mathematical concept helps significantly in the process of abstraction, which is needed in proceeding from concrete examples or models to the definition of an abstract concept. In learning the concept of function in calculus or binary operation in linear algebra, we use verbal, symbolical and graphical representations (VSG) simultaneously. In plane geometry, the students can be lead to invent theorems and proofs by providing them with step by step suggestions or hints. It is argued, and there is growing evidence, that especial advantage is gained by using dynamical interactive computer graphics. Today WWW documents can be reached from anywhere, they can contain e.g. Java based animations, and interaction between the user and the document is quite common. For example, a Java applet can reside in a server and it can be invoked by a remote document or user. The presentation contains a short description on how to produce automatically or manually controlled WWW-worksheets containing interactive JavaSketchpad animations equipped with motivating problems or guiding hints, and examples of how these worksheets have been used in teaching, in classroom and at distance. (Received September 15, 2000)