

Mathlets in Lecture, Segment 1 Conclusion

Mathlets: An Introduction

This is a good time to point out some of the common features of the MIT Mathlets. Briefly, all the MIT Mathlets exhibit a high degree of interactivity, narrow focus, multiple linked representation of information, click and drag control, rather than keyboard, and a uniformity of style and convention. Finally, let's ask, what are the advantages of the use of this technology that were brought out by this example?

I think you can just distinguish several different ones. First, the visual cortex occupies a large amount of real estate in the human brain. Visualization is a great way to convey information. Moreover, many parts of mathematics have a large geometric or visual component. Linear Phase Portraits provides a great example of this.

Second, in teaching mathematics, one often has to cope with the tension between the general and the particular. Students understand general statements through particular cases. In fact, we all do that. But if you write down a special case, it's not necessarily evident what aspects of it generalize and what are accidental.

The Mathlets allow you, or better, the student, to explore a whole continuous range of special cases. Together they convey a much better picture of the general case than any small number of special cases can. Now, onto the next segment.