# Mathlets in Homework, Conclusion

## Mathlets: An Introduction

Welcome back. Needless to say, in assigning homework using the Mathlets, you have to be sure that your students have access to the Mathlets. Equally obviously, any use of this technology has to fit into your own syllabus. A good strategy is to look through the list of Mathlets and pick ones that fit your needs. In any case, I think these homework examples illustrate several other virtues of the Mathlets.

For one thing, students learn best when they can work with the Mathlets themselves. Part of this is the power of kinesthetic learning. The process of physically manipulating something and observing the effect is a powerful educational strategy. It helps the students create a mental map, situating a range of observations in relation to each other. Sometimes I call the Mathlets "manipulatives", referring to the learning tools employed by Montessori schools.

Students also find satisfaction in the manipulation of the Mathlets. They find it rewarding to match observations with the results of computation. This feedback is valuable. A distinction has been made between two different types of feedback on student performance. Intrinsic feedback refers directly to the correctness of the student performance.

In contrast, extrinsic feedback refers to secondary qualities, such as being a good student. Teachers very often resort to extrinsic feedback. Students like to be complimented, but to be most useful as a teaching strategy, the reinforcement has to be tied directly to the desired performance.

Computer-based educational material is particularly effective at giving feedback directly related to specific student performance. And finally, the Frequency Response Mathlet illustrates how the Mathlets support transfer. By linking the abstraction of the mathematics to the concreteness of a model, the Mathlets help students connect skills learned in a mathematics class with applications outside of the class. Please see the course website for exercises in using the Mathlets in Homework.