Assement/Survey Interface

1 Student Interfaces

1. Unproctored survey interface: recorded, limited/unlimited tries, optional time limits, login required (Data should only be allowed to be seen stripped of identifying information, may be limited to “Fixed” and “Subjective Free-Form” answer types.)
2. Unproctored sample interface: unrecorded, unlimited tries, no time limits, no login required (maybe no class association required?)
3. Unproctored practice interface: minimal record-keeping, unlimited or limited tries, possible calandar or duration limits, login required
4. Unproctored homework interface: deatailed records, limited number of tries, optional calandar and duration limits, login required

Each interface must also allow

1. static graphics for both problems and responses
2. weights on a per problem part and problem basis
3. hints and help pages can be added
4. disabling of hints and help pages
5. allow data extraction through a documented interface
6. time based limits must be configurable on a per course, per section, and per student basis
7. number of tries must be configurable on a per course, per section, and per student basis
8. generic identification of MSU-enrolled students. (Expected to use PIDS)
9. all interfaces should support purely electronic grading (?)
10. Support mutiple answer types as one problem (all or nothing)

2 Fixed Answer Format

These all come down to supporting a string response which is compared against the "correct" answer by respecting or ignoring, case, and order; these will need sutibale intefaces placed on top of this comparison mechanism so as to make it simple for a student to answer in the proper format.

1. True/Sometime True/False
2. Multiple Choice (one or more choices true)
3. Ranking
4. Matching
5. Fill in the blanks from a list of possible of words
6. Fill in the blank (type in something exactly)

3 Numerical Format

Equal by value; needs to support these qualifiers

1. error range specificed by percentage, value, or functionally
2. significant figures
3. units, with/without prompting, with/without spaces

4 Matematical Expression Support

Mathmatical Expressions need to support three class of restrictions, each of these classes can be allowed or not allowed in a response.

1. Algebraic Functions
2. Transcendental Functions
3. Operators (Sum, Product, Derivative etc.)

Another restriction on how a student can respond is a complexity measure, if answer is "too complex" it can be disallowed. This can nominally be thought of a a parse tree depth. A too deep parse can be disallowed.

This answer type should support exact equivalence of any expression, purely numerical or with variables with ability to limit the class of possible responses by using the above categories.

5 Subjective Free-Form Answer

A student submits an answer that is graded by a TA or instructor.

6 Future Directions

1. Student manipulation of graphical elments
2. Student creation of graphical information
3. Inequalities