Numeric Targeted Feedback

Generic testing link.

JavaScript

```
//  A validator that also allows for targeted feedback.
//  Currently only works with numeric answers with some limitations (read comments in the va
//
//  Moreover, you need to use the corresponding ‘‘\feedbackOutput" command which builds the
//  You need the argument of the \feedbackOutput command to match the 'outputName' that you
//      validator function (see the example; using the output name 'outputOne'.
//      Note that the apostrophes are necessary as JS needs it to be a string.
//
//  Finally, the input for the validator needs to be written in javascript code, not LaTeX w
//      See the note in the validator; in short you need to use Math.e or Math.pi for the ma
//      For a list of javascript usable functions go to:
//          https://www.w3schools.com/js/js_math.asp
//      Keep in mind that the math module (all lowercase, as oppose to Math) is not loaded.
//          Among other things, this means there are no complex numbers or complex valued fu


function feedbackFunc(studentInput,outputName,ansCheck,ansFeedback,defaultfeedback='') {
    var studentAns = studentInput.evaluate();

    // Note that you can use e and pi by using Math.E and Math.PI;
    //      but these are using javascript values, not Ximera equalities.
    // This means testing equality is a lot more fragile;
    //      in particular function equality will be nearly pointless to test.

    // Set the default feedback text, for a student answer that doesn't match any predicted
    var feedbackText = defaultfeedback;

    // Now loop through the expected list and see if the student entered an expected answer.
    for (var i = 0; i < ansCheck.length; i++) {
        // If the students answer matches the current expected answer, print the correspondi
        if (studentAns==ansCheck[i]) {
            feedbackText = 'Feedback: ' + ansFeedback[i];
        }
        // If you have found the correct answer, return correct and we're done.
        if (studentAns==ansCheck[0]) {
            return 1;
```

Learning outcomes:

```
            }
    }

    // Print the feedback to the dummy element we built with \feedbackOutput.
    document.getElementById(outputName).innerHTML = feedbackText;

    // If we have gotten this far, we haven't found the right answer, so return false.
    return 0;
}
```

Problem 1 *Testing new feedback mechanism. The correct answer is* $\frac{20}{3}$. *But try typing in 4 or* $5 - e$ *first for targeted feedback example. This is to demonstrate that you can use some irrational constants, but keep in mind that they are javascript coded, not latex coded. See tex file for more detail. This validator currently only works with numeric values, and even then only kinda.*

`feedbackFunc(inputOne,'outputOne',[6+2/3,5-Math.E,Math.PI/6,4],['Correct!','Try going up 1+e`

$\boxed{x}$. *¡p id="outputOne"¿ ¡/p¿*