Ideas for the Senior High Class

Try Another Sequence

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How have your students been performing on the units dealing with Factoring and Rational Expressions? If you have been following the sequence in which these topics are treated in any of the approved texts for Mathematics 100, you no doubt present these topics as two separate units: Special Products and Factoring as one unit, and Rational Expressions as the other.

The relationship between these two units is quite clear, and the logical necessity of teaching the factoring first is also quite obvious. Moreover, factoring is such an integral part of the work on algebraic fractions that it seems advisable to combine these two topics into one unit, entitled "Factoring and Algebraic Fractions." If this is done, some interesting consequences result.

The first of these is the increased meaningfulness to the students of the task of factoring. The purpose of factoring as a tool in working with algebraic fractions becomes much clearer to them. Secondly, certain types of factoring, like grouping to factor, and possibly, the sum and difference of two cubes, become questionable items to be included in this mathematical diet. Thirdly, and what I consider a most interesting consequence, is the possibility now offered to present the material in a sequence other than the one followed by so many mathematics texts which include these topics within their covers. I am referring to that traditional arrangement in which all the types of factoring are presented first, followed by the reduction of fractions, multiplication, division, addition and subtraction of fractions. A section on complex fractions may then follow. The point to note is that *all* the types of factoring are treated first.

Here is another sequence which I have found very effective. After completing the work on common factors, rather than going on to the next type of factoring, proceed to the reduction of fractions which involve common factoring only. Then move on to the multiplication and division of fractions which utilize common factoring only, and finally to addition and subtraction of fractions in which only common factoring is involved. The next type of factoring can now be taken up and the same procedure followed through from reduction to subtraction of fractions in which only the particular type of factoring is involved.

You may discover, as I did, that this arrangement can be very effective.●