

An Enhanced Approach To Solving Equations With Radicals

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Doris, a student in my Intermediate Algebra class, came to see me during my office hour and asked for help with a homework problem. The equation she had difficulty solving was $\sqrt{x+2} = (x-3)$. Doris was one of my best students, so I was surprised that she had difficulty with this pretty standard problem. As it turned out, Doris made a mistake in copying the problem from the book. As a result, this equation had "messy" solutions rather than the nice integer solutions intended by the authors. The solutions to the modified

problem were $\frac{7 \pm \sqrt{21}}{2}$, involving radicals. Checking them in the original equation, as suggested by the textbook and the instructor, proved difficult even for Doris.