

The afterlife of competition problems

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The connection between research mathematics and competition problems is an important, but neglected area. One important aspect of this connection is how to pave the way for outstanding students from the problem-solving skills needed in competitions to the more complex world of the methods used in mathematical research.

Another remarkable aspect is the genesis of problems proposed in mathematical competitions. An important issue here — not without sociological connections — is, whether research mathematicians of a given community (country, university, etc.) are willing to contribute with good problems for competitions.

It is a third aspect of this connection on which I am going to concentrate in this talk. This is the outgrowth of fruitful mathematical investigation from competition problems. On the basis of several examples I will investigate such interactions. Their impact on competitions themselves, on problem selection, and on mathematics education will also be discussed.