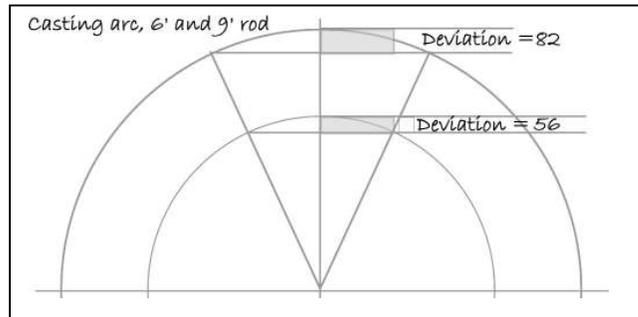


## Do long rods automatically cast worse loops than short one's?

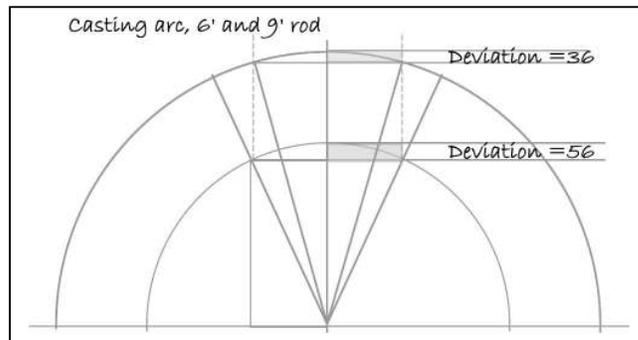
I had a very interesting and informative, not to mention highly mathematical response to my comments about the tendency of long rods to throw tighter loops or not as per my comments about Ed's reference last week. Duncan Nebbe wrote to me via the CPS with an explanation as to how such a theory would hold up mathematically. That is to say he suggested I draw myself the diagram as set out below.

(That's why you had to download this, no pictures allowed on the CPS newsletter).

The explanation is this (and please note these are rough scale diagrams and the figures only represent ratios but the point should still be apparent). **Duncan's explanation:**



In the first diagram, and based on Duncan's explanation if the arc of the rod is the same for a nine foot rod and a six foot rod then the deviation from horizontal, (assuming the rod doesn't bend etc etc) would be greater for the nine footer than the six footer, in fact some 46% worse if you have that kind of mind. The trouble is that bothered me until I realized that there is, as far as I am concerned an error in the mathematical model. I hate the "casting clock" style of teaching with a passion and think it causes unwarranted amounts of misery to neophyte casters all over the world. The error, in my opinion is that it is not the arc that needs to be constant but the distance that the line is accelerated during the power stroke.



So reworking the model to accommodate for the same length of power stroke and recalculating the deviation from horizontal for each rod we get an entirely different picture. Now the nine foot rod deviates significantly less than the six foot rod. In fact some 35% less. (See I told you I had been thinking about this stuff.) Which so far as I am concerned proves my point, it is not the arc that the rod moves through, in fact it shouldn't move in an arc anyway, but the length of the power stroke that is critical. More to the point it would be obvious that the nine foot rod butt would move considerably less to achieve the same acceleration stroke, and therefore it should be faster once again contributing to an improved loop. Sincere thanks to Duncan for bringing up the mathematical side of things.

I shan't be taking my slide rule with me when I practice casting but it is an interesting discussion.

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