

POW #3 - Algebra

Take Me Out to the Ballgame [Problem #16011]

A pitcher's Earned Run Average (ERA) is the mean average number of runs he gives up per nine innings pitched, which is a full game of baseball. For example, if he's pitched six innings and given up four runs, that's an average of two runs per three innings. Extending that to nine innings, he'd give up six runs, so his ERA would be 6.00 at that point.

As the season goes on and he pitches more games, his ERA will constantly change in value, but it always represents the average number of runs he would give up over nine innings of pitching. If he's given up 11 runs after pitching a total of 18 innings, his ERA would be 5.50.

I recently attended a Red Sox game, and one pitcher had an ERA of 13.50 when he came into the game. After he got one batter out, his ERA dropped to 13.00. Note that since there are three outs in an inning, one out represents a third of an inning pitched.

How many innings had that pitcher pitched before he came into the game I saw?

