

the necessity of inf in current standard curriculum  
 options for non believer, let down by intuitionists, finitists, so .. understand the 'way of thinking' instead of accepting usefulness + computers  
 applying finitist to infinite, one definite step, meta task, exhaustion,  
 russell proof about  $\aleph_0$  not inductive, what about one to one, why is it justified, grounded again in selective extrapolation of human experience  
 exchange versus count (history) why is count predominant  
 goal ... to establish foundations, doubt, is it a foundation, or extension in reverse direction?  
 (wittgenstein, cantor, interest sources) (accept next most obvious faced by the infinity problem: extrapolate the next possibility: one to one) one cannot build without foundation, is infinitesimal the foundation for the foundation? (mention kline's book). crucial step to continue with 'standard' and promises of 'will be explained later' (zeilberger's friend), note about 'cranks' later  
 do we need cantor's set theory (paper)  
 axiomatisation as a experience belief extractor, arbiter (dan's website)  
 psychology of infinity (papers) versus the artificial necessity (time, space) and the actual usefulness of degenerate ideal transfer (inacceptable 'as good as' source?)  
 crank: easy to attack, hard to defend, need help from sbd in majority, but .. majority ... a sign of uncritical thinking or having been there and resolved it ... the ppl who do not call names. so majority should be very careful in calling names but contradicts majority. (wittgenstein convince quote) when there is need and no need of discussion  
 unavoidable turn to philosophy (early! russell's into paper and set theory exercises) but need to want to try to understand (e.g. critiques hands vs humans of no value)  
 (source: [http://philonline.org/library/guminski\\_5\\_2.htm](http://philonline.org/library/guminski_5_2.htm))

give analogy examples for some points  
 talk a bit about each paper (footnote?)  
 quote

<http://www.jstor.org/discover/10.2307/3481965?uid=3737864&uid=2460338415&uid=2129&uid=2&uid=70&uid=4&uid=83&uid=63&sid=21101515942501> (The Intuition of Infinity)

E. Fischbein, D. Tirosh and P. Hess  
 Educational Studies in Mathematics  
 Vol. 10, No. 1 (Feb., 1979), pp. 3-40

quote: mental model (find paper)  
 quote 'symbol game', which turns to forced 'educational intervention' belief, turns to creative handicap, accept but cannot use.  
 quote doubts of cantor, changes of russell, embracement of symbol game -> useful to cantor/russell, handicapping now for 'students' after the transformation to 'foundation'

next one: logical necessity resolution by invariance of experience, any exp leads to that,

chemical necessity (flies to bulb) to genetic hard coding? (some humans follow bulb) but still essential for any organism's survival..