Teacher's guide

3. The simplest rule is to stick in a \/ and then append the opposite of the previous list, with the order reversed and all the \/ switched to /\ and vice-versa. This is not too hard to prove: the reverse order and switching is exactly what the fold does.

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4. Lining them up like this, you should see that if you delete all the odd-numbered ones from a list, you'll get the previous list! On the other hand, if you want to go forward, how do you know what to add? Can you see how to explain this in terms of the folding? The ones that stay the same are in fact the same creases, but what about the insertions--why do they alternate like that?

7. Here's how it goes:
   1
   1 3 2
   1 3 2 3 1
   1 3 2 3 1 4 2
   1 3 2 3 1 4 2 3 1
   1 3 2 3 1 4 2 3 1 3 2

   How does this method of generating the list relate to the two facts (repeat and reverse, and "halving") that we found before?