Staircase sequences

Teacher notes

Why use this resource?

This resource should provide a thought-provoking introduction to continued fractions, which leads on to several other resources that use continued fractions, both at this station and at Thinking about algebra? The resource is accessible to students with a basic understanding of fractions and can reinforce skills such as adding fractions and taking the reciprocal of a fraction.

Possible approaches

- It would be nice to allow students to explore this resource in quite an open way, so that some students can be challenged to consider the links to irrational numbers in more detail.
- The two sequences could form the basis of a lesson starter, providing a curious hook into any work on fractions, sequences, irrational numbers, and so on.

Possible extension

Comparing continued fractions

A version of this resource has been featured on the NRICH website. You might like to look at some students' solutions that have been submitted there.

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