

Why use this resource?

Students have to manipulate fractions involving surds in the denominator. When these denominators are rationalised these fractions simplify and the problem becomes much easier to handle.

Possible approach

The initial problem could be used to begin a lesson on fractions, surds and general algebraic manipulation. The follow up exercises can be used to extend the problem into a longer activity or as an extension for interested students to attempt in class or in their own time.

Key questions

- How does symmetry help you to solve this problem?