3 The Mathematics of Sharing

3.1 Fair-Division Games

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3.4 The Lone-Chooser Method

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Divider-Chooser Method

The **divider-chooser method** (also called the *you cut–I choose method*) can be used when the fair-division game involves two players and a *continuous* set *S*

As this name suggests, one player, called the *divider*, divides *S* into two shares, and the second player, called the *chooser*, picks the share he or she wants, leaving the other share to the divider.

Divider-Chooser Method

This method guarantees that divider and chooser will each get a fair share (with two players, this means a share worth 50% or more of the total value of *S*).

Not knowing the chooser's likes and dislikes (privacy assumption), the divider can only guarantee himself a 50% share by dividing *S* into two halves of equal value (rationality assumption); the chooser is guaranteed a 50% or better share by choosing the piece he or she likes best.