

The Three-Way Duel

History and provenance

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A truel rather than a duel

A three-person duel is usually called a *truel*. D. Marc Kilgour and Steven J. Brams published *The Truel* in *Mathematics Magazine* 70(5) (1997), pages 315–326; Brams’s publication list confirms the citation [1].

Ferguson’s historical discussion traces a balloon-target version to Clark Kinnaird’s 1946 *Encyclopedia of Puzzles and Pastimes*. It also lists H. D. Larson’s *A Dart Game*, proposed in *The American Mathematical Monthly* 55 (1948), page 248, with Leo Moser’s solution on pages 640–641 [2]. These are earlier related treatments, not an established origin for this page’s exact three accuracies.

Rules that distinguish variants

Turn order, deliberate misses, repeated shots, and each player’s objective can all change the answer. This page uses the order C, B, A, independent hit probabilities $1/4$, $1/2$, and 1 , and permission to miss deliberately. A hit removes a player from the game.

I did not establish an inventor of this exact numerical variant. Its lighter game wording does not change the strategic calculation.

Sources

- [1] Steven J. Brams, curriculum vitae (March 2023), listing The Truel, with D. Marc Kilgour, *Mathematics Magazine* 70(5) (1997), 315–326.

<https://as.nyu.edu/content/dam/nyu-as/politics/documents/faculty/brams/CV%202023%20%28Brams%29.pdf>

- [2] Thomas S. Ferguson, Choice of Weapons for the Truel, unpublished manuscript, section 1 and references.

<https://www.math.ucla.edu/~tom/papers/unpublished/truel2002.pdf>

Sources checked September 7, 2026. A documented appearance is not necessarily the earliest appearance.