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Integral representations for binomial sums of chances of winning*

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Abstract: Addona, Wagon and Wilf (*Ars Math. Contemp.* 4 (1) (2011), 29-62) examined a problem about the winning chances in tossing unbalanced coins. Here we present some integral representations associated with such winning probabilities in a more general setting via using certain Fourier transform method. When our newly introduced parameters (r, d) are set to be $(0, 1)$, one of our results reduces to the main formula in the above reference.

Keywords: Binomial sum, integral representation, probabilistic analysis, unbalanced coin.

Math. Subj. Class.: 11B65, 33D45, 42A16, 60C05, 91A60

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Integralska reprezentacija binomskih vsot možnosti za zmago*

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Povzetek: Addona, Wagon in Wilf (*Ars Math. Contemp.* 4 (1) (2011), 29-62) so raziskovali problem, kakšne so možnosti za zmago pri metanju neuravnoveženega kovanca. V tem članku predstavimo nekaj integralskih reprezentacij, povezanih s takšnimi verjetnostmi za zmago v splošnejšem kontekstu z uporabo določenih metod Fourierove transformacije. Ko vrednosti v tem članku definiranih parametrov (r, d) nastavimo na $(0, 1)$, se eden od naših rezultatov prevede na glavno formulo zgoraj omenjenega članka.

Ključne besede: Binomska vsota, integralska reprezentacija, verjetnostna analiza, neuravnovežen kovanec.

Math. Subj. Class.: 11B65, 33D45, 42A16, 60C05, 91A60

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