

Example 8: How many ways are there to deal 5-card poker hands from a 52 card deck to each of the four players

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Question 1b: A professor packs her collection of 40 issues of a mathematics journal in four boxes with 10 issues per box. How many ways can she distribute the journals if each box is numbered, so that they are distinguishable?

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Example 9: How many ways are there to place 10 indistinguishable balls into 8 distinguishable bins?

19448

Question 2b: How many ways are there to distribute 12 indistinguishable balls into six distinguishable bins?

6188

Example 10: How many ways can Anna, Billy, Caitlin, and Danny be placed into three indistinguishable homerooms?

14

Question 3b: How many ways are there to put five temporary employees into four identical offices?

51

Example 11: How many ways can you pack six copies of the same book into four identical boxes?

9

Question 4b: How many ways are there to distribute five indistinguishable objects into three indistinguishable boxes?

5