Lemma A.7. *Let K_1, K_2 be distinct copies of the domino gadget. Let A_1 be a rim of K_1 that is attached to a rim A_2 of K_2. If x_{K_1} is inside A_1, then x_{K_2} is not inside A_2, i.e. the domino pieces can not be placed so that two adjacent squares are both black.*

Lemma A.8. *Let K is a copy of the domino gadget, and let $\mathcal{C}_i$ be a clause gadget. Let A_1 be a rim of K that is attached to a rim A_2 of $\mathcal{C}_i$. If y_i is inside A_2, then x_K is not inside A_1.*

Lemma A.9. *If M embeds into ℓ_∞^2 with distortion less than $7/2 - O(\varepsilon)$, then φ is satisfiable.*

Proof. Considering any way of covering the domino gadgets with domino pieces and colouring at least one square of each clause gadget black. From this we will produce a satisfying assignment χ. Consider the variable χ_i. Because no two adjacent squares are both black, the domino pieces are placed on the rectangular path of the variable gadget $\mathcal{V}_i$ either with each piece's black square pointing counter clockwise or each pointing clockwise. Set $\chi_i = 1$ iff it is counter clockwise. Now consider a clause C_j. We must prove that it is satisfied by this assignment. At least one of the three squares in the clause gadget $\mathcal{C}_j$ must be black. Let χ_i be the variable corresponding to the literal gadget $\mathcal{L}_{\langle i,j\rangle}$ adjacent to this black square. Because no two adjacent squares are both black, the black square of the domino pieces placed on this literal gadget must face towards the variable gadget $\mathcal{V}_i$ ending in a black square. Hence, the square in the variable gadget $\mathcal{V}_i$ adjacent to this literal gadget must be white. If χ_i appears in C_j as a positive literal, then this white square is the clockwise most square in this domino gadget. Hence, we set $\chi_i = 1$ satisfying the clause C_j. Similarly, if χ_i appears in C_j as a negative literal.