



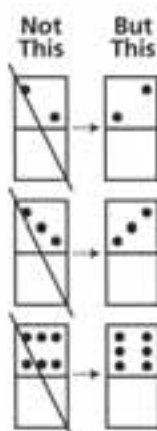
# Blackout

**Task** Students play a game in which they try to cover a domino-patterned game board with matching dominoes. The goal is to be the first to completely cover the board.

**Setup** Each pair of students uses one set of double-six dominoes and a "Blackout" mat. (A set of double-nine dominoes may be used for the Follow-up game.)

**Start-up** The mat is cut in half so that each student has a game board. The dominoes are turned face up on the playing area. Players take turns looking for a domino whose two faces exactly match adjacent squares on their game board. When they find that domino they use it to cover the matching faces on the board. On any turn, instead of picking, a player may choose to remove a domino from the game board or to move a domino to another position. The winner is the first player to cover his or her game board completely. (If neither game board is completely covered but students are unable to make a play the game ends, and the player with the fewest uncovered faces wins.)

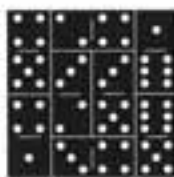
**Discussion** As students match dominoes to their game boards, they must be sure to place them so that the pip arrangements are oriented in exactly the same ways. They should take particular care to match the ways in which two, three, and six pips appear on the dominoes with the ways they appear on the game board.



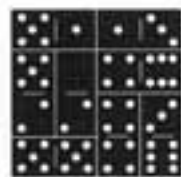
Some students may notice how the symmetry of the pip patterns affects playing a domino. When a student is declared the winner, the game board should be checked to be sure that the faces of the dominoes are correctly oriented.

One possible solution:

Gameboard A



Gameboard B



It is possible to cover both game boards with one set of dominoes simultaneously.

**Keep up** Either as a warm-up to familiarize students with the course of play, or as a way to help students develop playing strategies, you may want to have them play *Blackout Solitaire*. In this game, each student works alone with a complete domino set from which he or she seeks out the dominoes needed to completely cover both game boards.

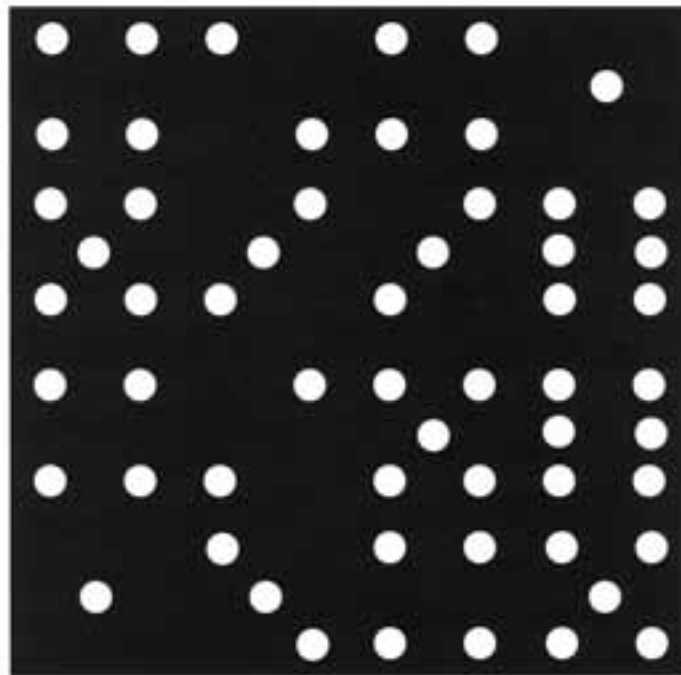
**Wrap-up** Key questions for discussion or response in journals:

- How did you know when two faces that are next to each other on the game board could not possibly be on the same domino?
- Where on the game board is it best to begin placing dominoes? Explain.

**Follow-up** Additional Blackout-mat game boards may be generated for double-six and/or double-nine domino sets. Just put facedown dominoes on a copy machine and manipulate them into different-sized rectangular configurations. Cover the configurations with a sheet of paper and make the copy. Use a felt marker to darken any white gaps that appear on it. Then copy the copy to produce the finished game boards.

# Blackout

Gameboard A



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# Blackout

Gameboard B

