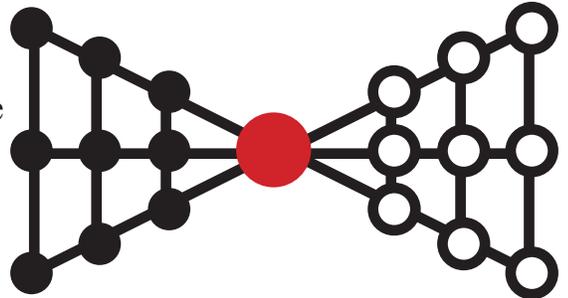


# 2D Geometry

## Activity 2 - Butterfly

Butterfly is a two-person game of skill from Mozambique. The shape of the game board resembles the wings of a butterfly. This game is enjoyed by people of all ages, and now you can enjoy it too!



### In order to play the game you will need:

- Game board
- Nine game pieces of one kind, and nine of another kind. Hint: You can use stones, beans or buttons for your pieces. You can also cut out two different shapes from paper (circles and triangles for example).

### How to Play:

- To start the game, both players put all their nine pieces onto the board. As indicated on the game board above, one player puts the game pieces on the white circles, and the other player uses the black circles. The bigger circle in the middle stays empty.
- Decide who goes first.
- The first move of the game always has to be to the centre circle because that is the only empty space on the game board.
- Game pieces can move one space along any line from one of the circles to the next circle in any direction, provided that the next place is empty.
- If the opponent's piece is between your piece and a free place, your piece can jump the opponent's piece to the free space. The opponent's piece is then considered "eaten" and is removed from the game board (this is similar to the game of Checkers).
- Players alternate taking turns to move their pieces. Even if a player has "eaten" the opponent's piece, that player does not get an extra turn.
- The object of the game is to "eat" all your opponent's pieces.
- The game ends when one player loses all his or her pieces.

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Can you believe THIS is math?

# 2D Geometry

## Activity 1 - Butterfly - *continued*

### Activity Questions:

1. What geometrical shapes can you find on the game board?
2. What shape(s) represents the wings of the butterfly in the game board?
3. How many vertical lines can you find on the game board? How many horizontal lines are there? Can you find any parallel lines?
4. Does the game board have any lines of symmetry? That is, can you find any lines along which you can fold the board in such a way that the two parts of the board will be mirror images of each other? If yes, where are these lines of symmetry?
5. Practice the game several times. Can you find the winning strategies? Is there any advantage to going first?

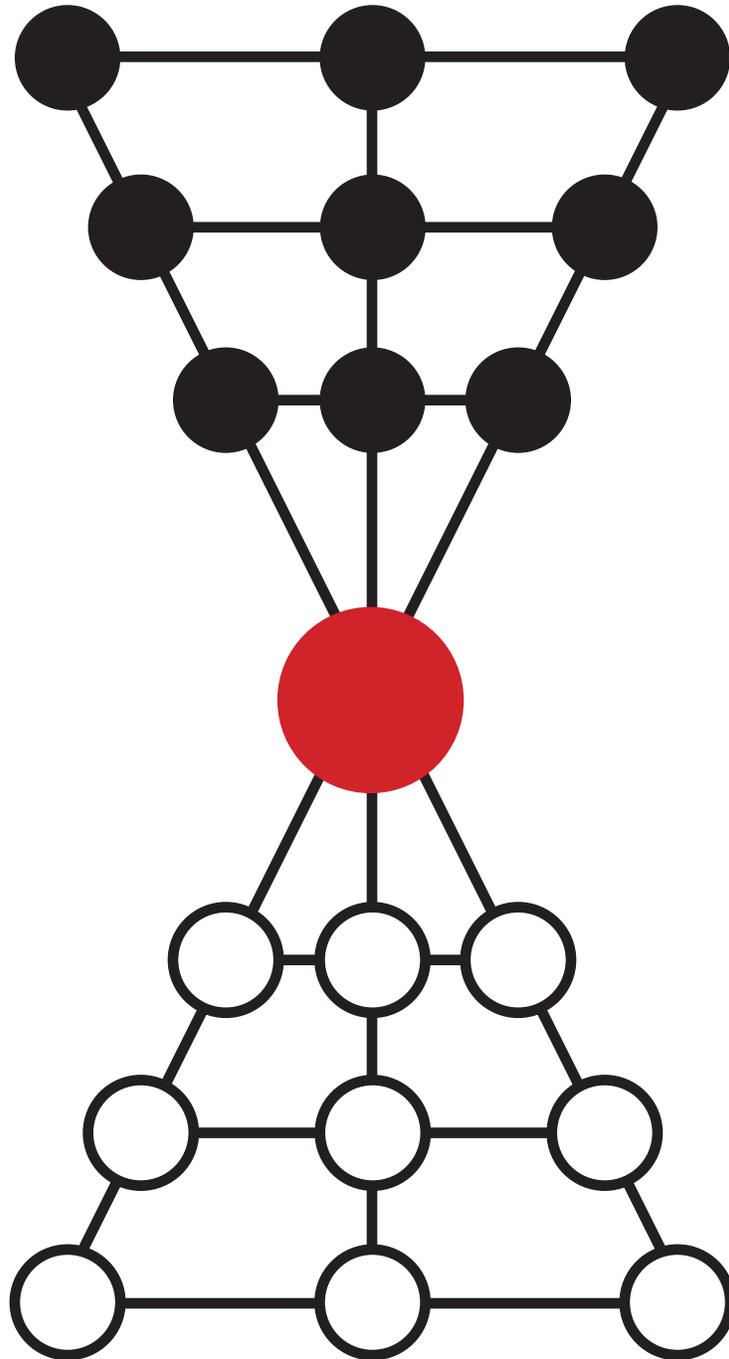
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# 2D Geometry

## Butterfly Game Board



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