

Pents

The game

The goal of the game is to solve a puzzle by placing the available pieces until you completely fill a board.

The pieces are 12 forms, called *pentominoes*, consisting of all possible arrangements of 5 squares connected along the sides.

Many board layouts are available and you can design your own boards to be resolved. Each board admits a specific number of solutions, ranging from one to several thousands.

The most difficult boards have 60 squares and require the use of all 12 *pentominoes*; more simple boards can be constructed with fewer squares and resolved with fewer pieces.



How to play

The playground displays a board to be solved and a sliding tape on which the 12 pentominoes are positioned. You can

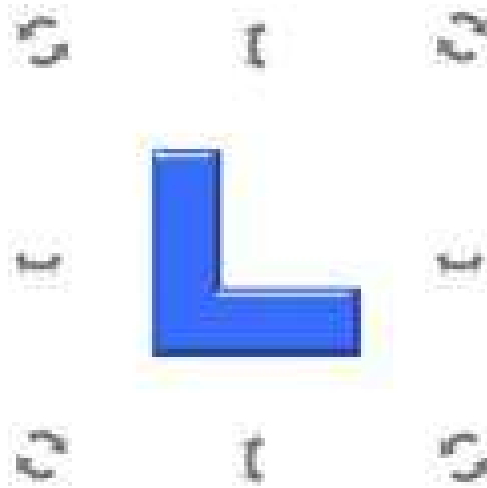
pick a piece up by keeping your finger on it for one or two seconds, then you can move it directly onto the board or you can first reverse and rotate it in order to have it in the desired orientation. Once removed from the tape, each piece can be moved even without exactly placing your finger over it. If the piece is dropped next to a free position, it is automatically placed into the board.

If you want to rotate it before placing it, you must first move it to the background or to an already occupied position in the board.

To rotate and flip a piece you can use the tab bar buttons shown here:



Another way is to give a double tap **around** the piece (not **over** it): above or below to flip it vertically, to the right or left hand side to flip it horizontally, close to the diagonal to rotate it.



To remove a piece from the board, simply move it from its position onto the sliding tape, or select it and simply give a tap on the tape.

The following information are displayed around the board:

- number of pieces needed to solve the puzzle,
- play time,
- number of existing solutions,
- number of used hints.

If you are unable to solve the puzzle, you can ask for a hint: if the pieces are already in the correct positions, the program places the next one, otherwise it removes pieces until a correct combination is found, then it add a new piece. You can ask for up to three hints.



You can leave the game and return to the menu at any time. The game is paused and you can resume it later.

To quit the current game and restart it, tap on the "Give up" button.

When you solve a puzzle, the program checks whether it is a new solution and saves it.

Boards

There are 30 predefined boards, that are just examples of what can be created and used in the game.

By pressing the "Make a board" button, you have the ability to draw a new board having the size and shape you like.



The "board editor" buttons, shown below, allow you to set the editor in the following operating modes:

Draw: moving your finger you draw a rectangle that is filled with squares;

Erase: moving your finger you draw a rectangle that contains the squares to be deleted;

Auto: if you start on an existing square, the squares under your finger will be erased, if you start on a blank cell, you draw new squares;

Zoom: moving your fingers you can zoom and scroll the picture.




While you draw the board cells, a number in the top right corner shows how many pieces are needed to solve (fill) the board; a smaller number on the right hand side shows the number of extra cells that cannot be filled. Those numbers are colored in red if the table requires more than 12 pieces, in yellow if there are extra cells (i.e. if the number of cells is not a multiple of 5). When the number is green, the table can be saved, by pressing the "Done" button.

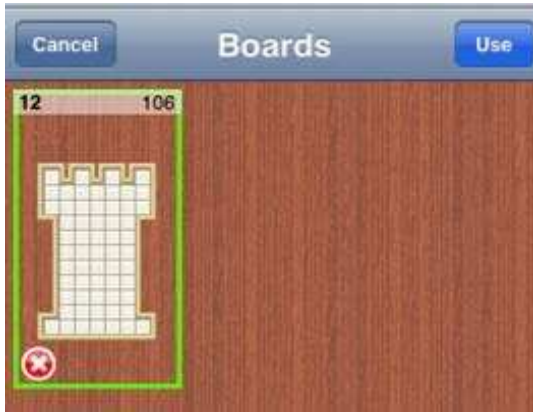
A table can even be formed by several unconnected parts. When you save a table, the program checks for its validity, i.e. it checks that one solution exists at least. In such a case, it is possible to let the program compute all existing distinct solutions (solutions that only differs by a rotation or reflection of the board are considered as one).

Depending on the board shape, the search for all solutions may take several minutes; you can interrupt it or you can let it continue as a background process, so that you can continue playing while the program continues its computation.

By pressing the "Boards" button in the menu page, you can display all defined boards and select the one you want to solve. Each board is displayed as a thumbnail image, tagged with the number of pieces and the number of solutions.

Boards created by the user can be removed by pressing the

corresponding  icon. By removing a board, all related solutions will be lost.



Solutions

By pressing the "Solutions" button in the menu page, you can display all boards and all solutions found for each of them. The number of found solutions compared to the total number of existing solutions are shown (a plus sign near the number means "at least").



By selecting a board, you get to a new page where each solution is shown as a thumbnail, together with the number of hints and the time needed for solving it.



By pressing the "Use" button you can solve the selected board.

Settings

The Settings page allows you to change the look of several elements of the game.



By pressing the round buttons you can see the various appearance that can be applied to: pieces, sliding tape, background, board. All of them can also be set to "random".

More, you may choose to have a grid displayed on the board, and you may hide the timer.

And you may also change the following three options:

- automatic skip of the menu page when you start the application after a game was interrupted;
- automatic saving of all new found solutions
- automatic game start when a new board is created and saved.