Minesweeper

Player's Guide

Overview

Minesweeper is a logic puzzle game played on a grid of hidden cells. Some cells conceal mines; the rest are safe. Your goal is to reveal every safe cell without detonating a mine.

The game runs entirely in a single HTML file; no installation is required. Open it in any modern browser on desktop or mobile.

Difficulty Levels

Choose your difficulty using the buttons at the top of the screen. The Custom option lets you set the grid size and mine count manually.

Level	Grid	Mines	Safe Cells
Beginner	9 × 9	10	71
Intermediate	16 × 16	40	216
Expert	16 × 30	99	381
Custom	6–30 × 7–50	You choose	—

Custom grids accept 6–30 rows, 7–50 columns, and at least 1 mine. The mine count is capped at (rows × columns − 9) to guarantee the first click is always safe.

Controls

Action	Desktop	Mobile (iOS/Android)
Reveal a cell	Left click	Tap the cell
Place / remove a flag	Right click	Hold finger (~0.5s) and watch for the 🚩 animation
Chord (clear neighbors)	Middle click or Ctrl+click	Not available

How to Play

Starting the Game

The board is blank until you make your first click or tap. The first move is always safe as mines are placed after your first reveal, guaranteeing you can never lose immediately.

Revealing Cells

Click or tap any unrevealed cell to expose it. Three things can happen:

- **Empty cell (no number):** The cell and all connected empty cells flood-open automatically, revealing a safe region at once.
- **Numbered cell:** Shows how many of the 8 surrounding cells contain mines. Use these numbers to reason about mine locations.
- **Mine 💣:** Game over. All mine locations are revealed (see End of Game below).

Flagging Suspected Mines

- **Desktop:** Right-click an unrevealed cell to place a flag 🚩. Right-click again to remove it.
- **Mobile:** Hold your finger on a cell for about half a second. A large 🚩 animation confirms whether the flag was placed or removed and is visible even with your finger covering the cell.

The mine counter in the top-left decrements with each flag placed and increments when a flag is removed. It can go negative if you place more flags than there are mines.

Chording (Desktop Only)

When a numbered cell's adjacent flag count matches its number exactly, you can chord it to instantly reveal all remaining unflagged neighbors:

- Middle-click the numbered cell, or
- Hold Ctrl and left-click it.

Warning: if any adjacent flag is wrong, chording will detonate a mine.

Winning

Reveal every safe cell. When the last safe cell is uncovered, the game ends automatically. Any mines that were not yet flagged receive a flag, and the mine counter drops to 000.

Status Bar

- **Left display (red LED):** Remaining mines or total mines minus flags placed.
- **Center emoji button:** Shows game state. Click or tap at any time to start a new game.
- **Cell counter (below emoji):** Safe cells revealed so far out of the total safe cells available.
- **Right display (red LED):** Elapsed time in seconds, counting from your first move.

Emoji key: 🙂 Ready 😮 Playing 😎 Won 😵 Lost

End of Game — Reading the Board

When you hit a mine the full board is revealed. The display uses four distinct states so you can immediately see what happened:

What you see	What it means
on a plain background	Correct flag: mine was here, well done
on a light red background	Wrong flag: that cell was safe; mine was not there
on a plain background	Unflagged mine that wasn't hit
on a bright red background	The mine you hit and the one that ended the game

This lets you review your flagging accuracy at a glance. Correct deductions stay as flags, errors show red, and the fatal mine is unmistakable.

Strategy Tips

1. Always start in a corner or edge as the first reveal which often opens a large safe region.
2. Numbers near the edge of the board constrain fewer cells, making deductions easier.
3. If a numbered cell is already surrounded by the correct number of flags, chord it to clear the rest quickly.
4. On mobile, use the mine counter as secondary confirmation when flagging in fast play. The counter decrements the instant the flag registers.
5. When guessing is unavoidable, pick a cell adjacent to the fewest unresolved numbers to minimize risk.

Resetting and Changing Difficulty

Click or tap the emoji button at any time to restart with the same settings. To change difficulty, click one of the four buttons at the top and the board resets immediately. Custom games also reset when you press Apply after adjusting the grid or mine count.