Nonograms in the classroom

10 sheets, in the order to hand them out · 10×10 · 15×15 · 20×20
the same ten sheets as blobsmith.lbwma.com/free-nonograms,
re-cut for a class: hand-out order, a desk page and a record sheet

Every sheet solver-verified:
one unique solution, zero guessing required

Blobsmith Studio · vol. 1

blobsmith.lbwma.com/nonograms-in-the-classroom

How to solve a nonogram

Each number tells you the length of a run of filled cells in that row or column, in order. Runs are separated by at least one empty cell. This page is the pupil-facing version; the four deductions are drawn out one at a time at blobsmith.lbwma.com/how-to-solve-nonograms, which prints as a handout.

1. Start with big numbers: a 10-clue in a 10-wide row fills the whole row.
2. Overlap logic: a 7-clue in a 10-wide row always fills the middle 4 cells, wherever it slides. In general a run of k in a line of n guarantees $2k - n$ cells — which is real arithmetic, with a threshold, that a pupil can check by hand.
3. Mark cells you know are *empty* with a small dot — knowing where runs can't be is half the game.
4. Alternate between rows and columns; every deduction unlocks new ones.

No guessing, ever. Every sheet in this pack was verified by a solver to be completable with pure line logic, with exactly one solution. If you're stuck, there is always a deducible cell somewhere.

Before you photocopy anything

The sheets in this file are already in the order to hand them out, and numbered in that order: **Sheet 1** first, **Sheet 10** for whoever finishes early. Each sheet is one page, so a class set is one page copied thirty times — not this file copied thirty times.

The order is not grid size and not taste. Every sheet was run through the same solver that signs off the paid book, and two numbers came out of it. **Passes** is how many times you sweep the whole grid — rows, then columns, then rows again — before it closes: it is how long the sheet *drags*. **First sweep** is how many cells fall out of the very first pass over the rows: it is whether a pupil gets traction in the first few minutes or stares at an empty grid.

Hand out	Picture (do not say)	Grid	Passes to close	First sweep opens	Sheet no. in the free web pack
1	lantern	10×10	3	66 of 100 (66%)	4
2	clock	10×10	3	56 of 100 (56%)	5
3	paw	10×10	3	46 of 100 (46%)	3
4	snowman	15×15	3	102 of 225 (45%)	6
5	snowflake	10×10	3	20 of 100 (20%)	2
6	gift	10×10	3	2 of 100 (2%)	1
7	gamepad	15×15	4	170 of 225 (76%)	9
8	robot	15×15	4	107 of 225 (48%)	7
9	alien	15×15	5	120 of 225 (53%)	8
10	hot air balloon	20×20	7	120 of 400 (30%)	10

Say this to a pupil who is stuck: “there is a square somewhere on that grid you can be sure about — go and find a different row.” On these ten sheets that is literally true and always true. Every one of them was rejected unless it closes on row-and-column logic alone, with exactly one solution, and with that solution being the picture that was drawn. That is why this order is safe to hand out: no pupil is ever stuck on something that is not there.

The ★ marks printed on the sheets are grid size, nothing else. The ladder above is difficulty, and the two disagree on purpose — the hardest sheet here (hot air balloon, 7 passes) is not the one a class finds hardest to start, and the easiest (lantern, 66% of the grid on the first sweep) is the one that gets a room moving.

Class record — one line per pupil

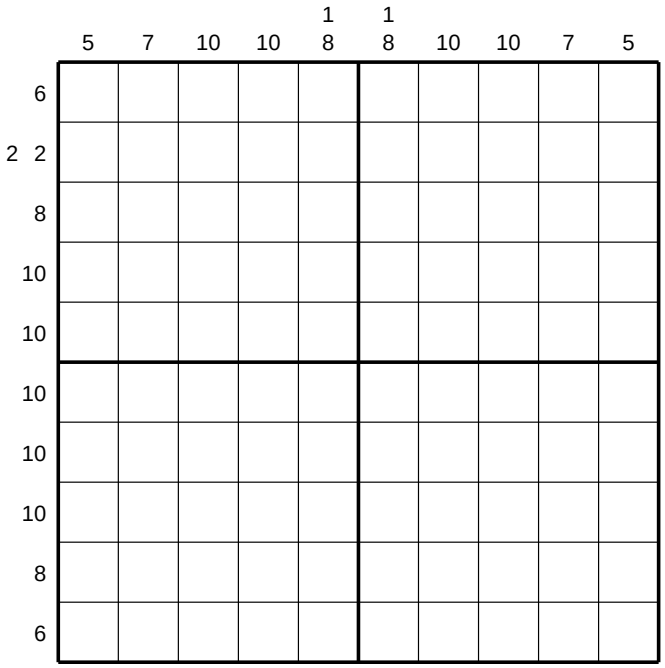
Class _____ Date _____ Sheet handed out _____ · Teacher _____

Pupil	Finished?	Minutes	Hint needed?	Where they got stuck (row / column)

The last column is the one worth filling in. If the same row number keeps appearing, that is not thirty pupils being stuck — that is one deduction the class has not been taught yet, and it is nameable: overlap, the full line, the forced gap, or elimination. All four are drawn out step by step at blobsmith.lbwma.com/how-to-solve-nonograms, which prints as a handout.

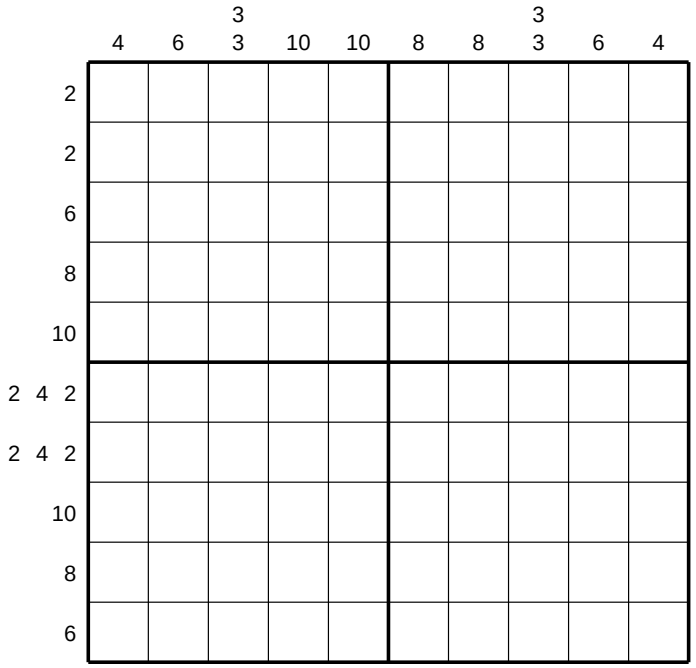
Sheet 1

10×10 · ★



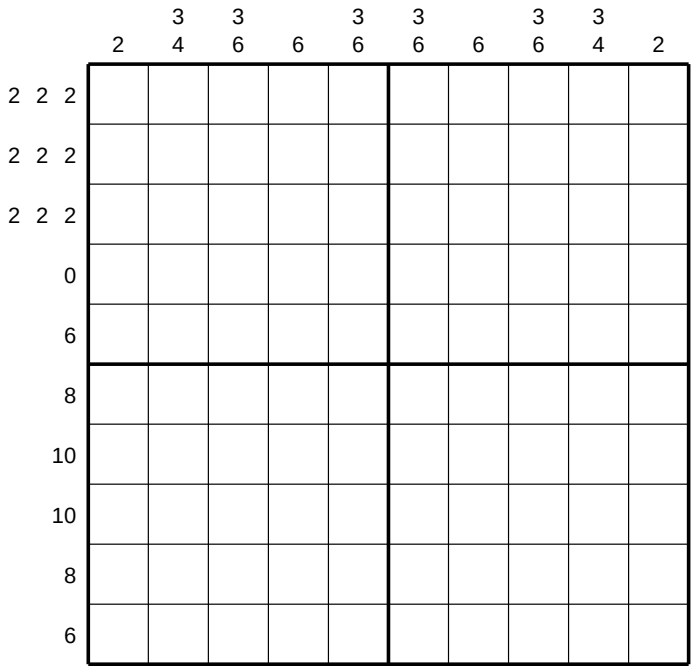
Sheet 2

10×10 · ★



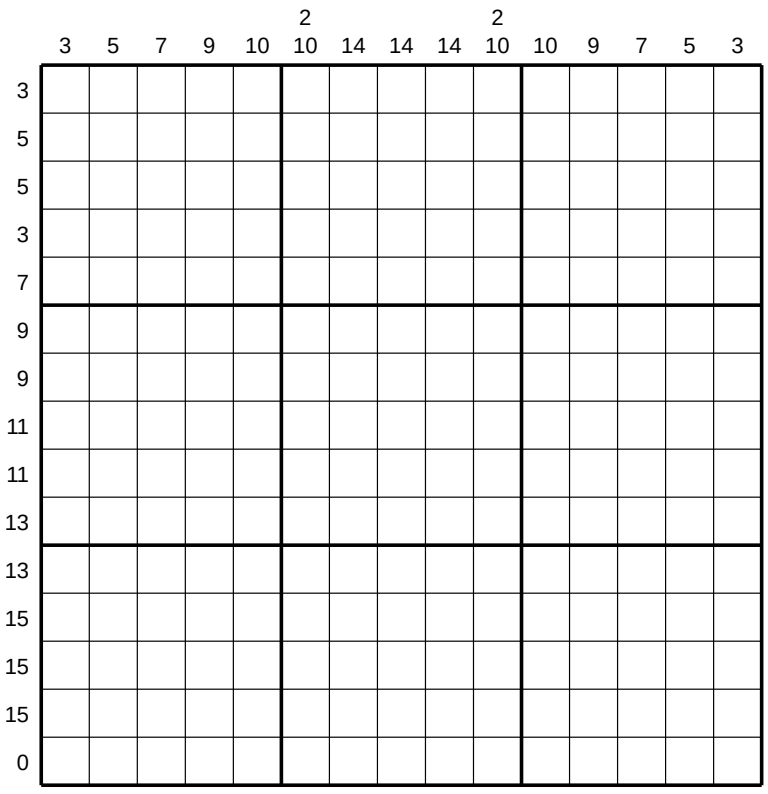
Sheet 3

10×10 · ★



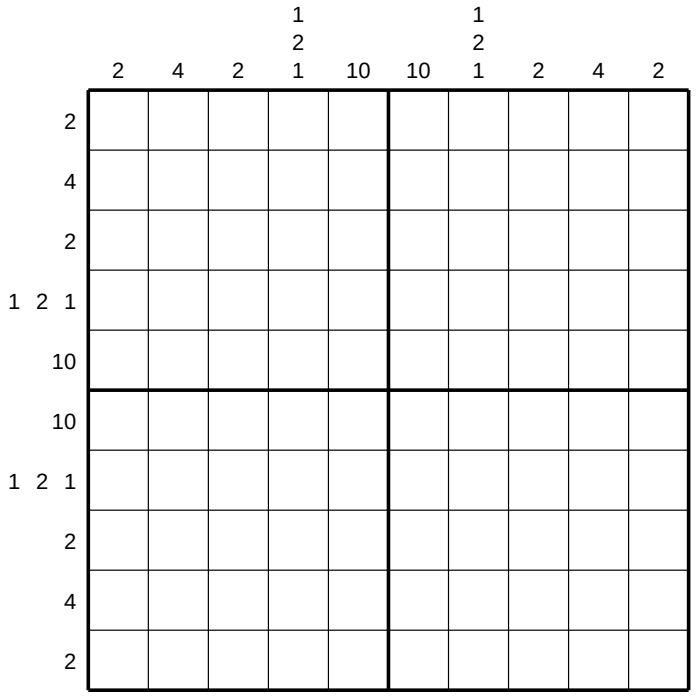
Sheet 4

15×15 · ★★



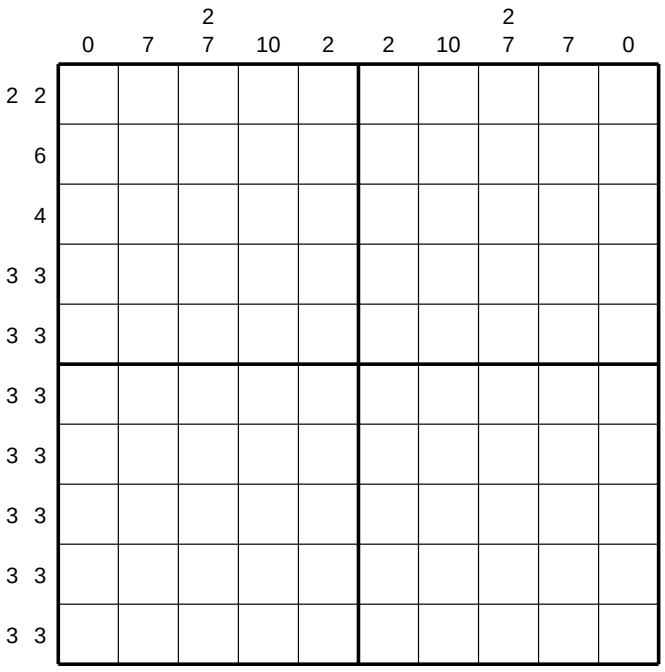
Sheet 5

10×10 · ★



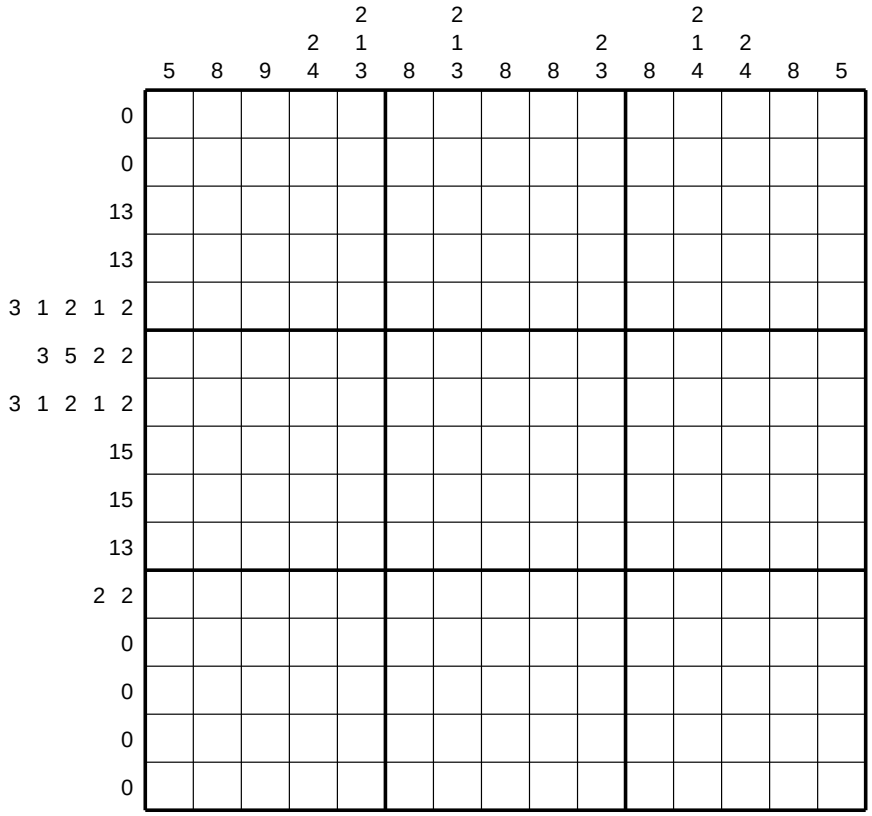
Sheet 6

10×10 · ★



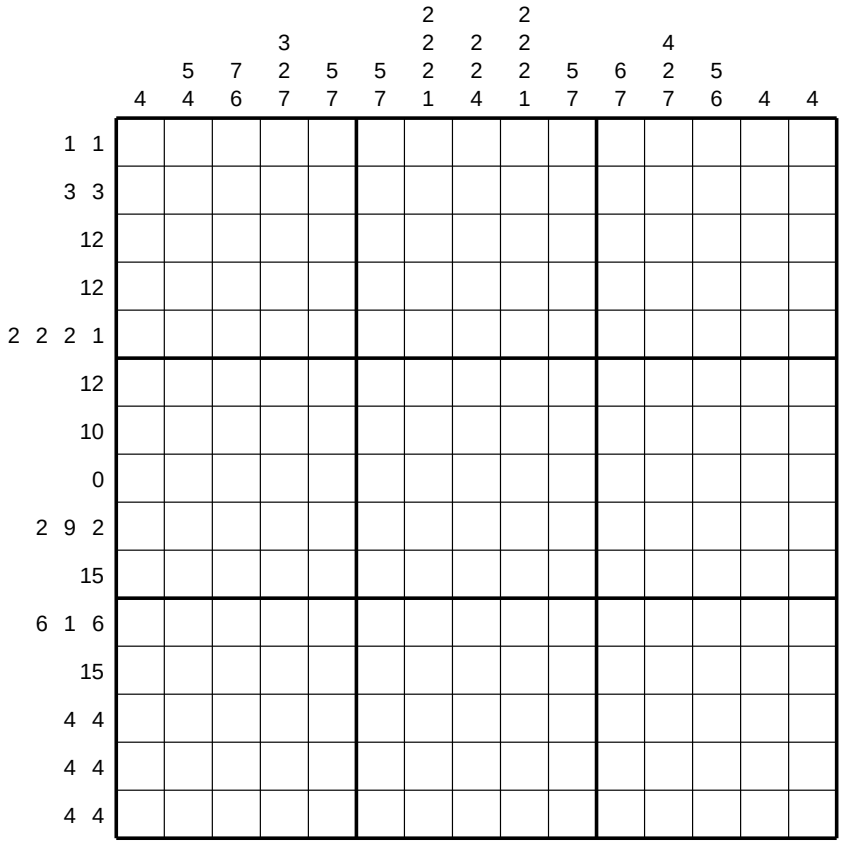
Sheet 7

15×15 · ★★


5 8 9 24 213 8 213 8 8 23 8 214 24 8 5
0
0
13
13
3 1 2 1 2
3 5 2 2
3 1 2 1 2
15
15
13
2 2
0
0
0
0

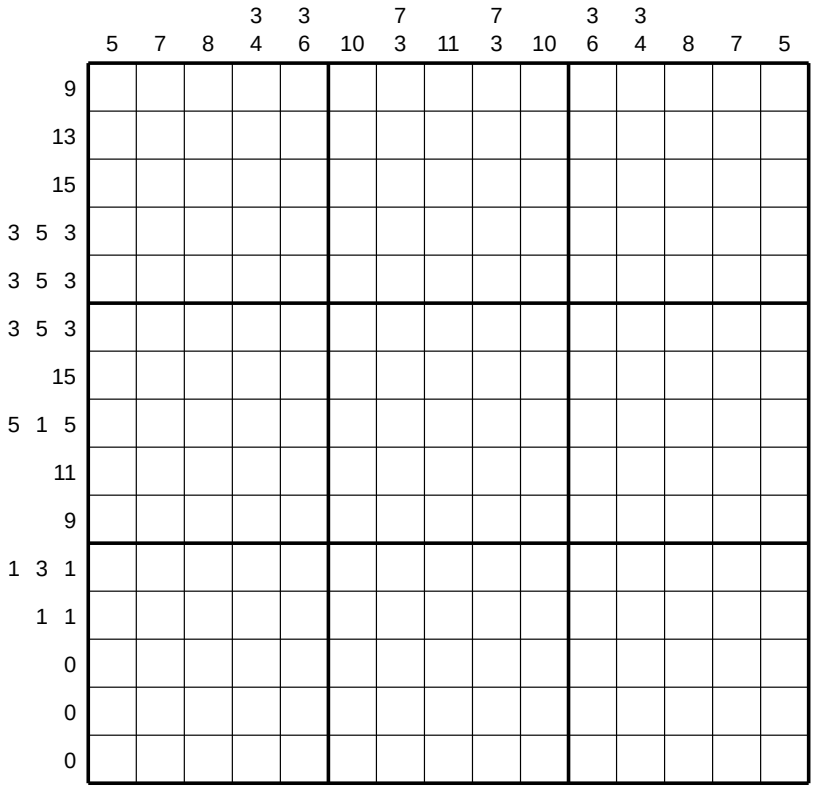
Sheet 8

15×15 · ★★


4 5 4 7 6 3 2 7 5 7 5 7 2 2 2 1 2 2 4 2 2 2 1 5 7 6 7 4 2 7 5 6 4 4
1 1
3 3
12
12
2 2 2 1
12
10
0
2 9 2
15
6 1 6
15
4 4
4 4
4 4

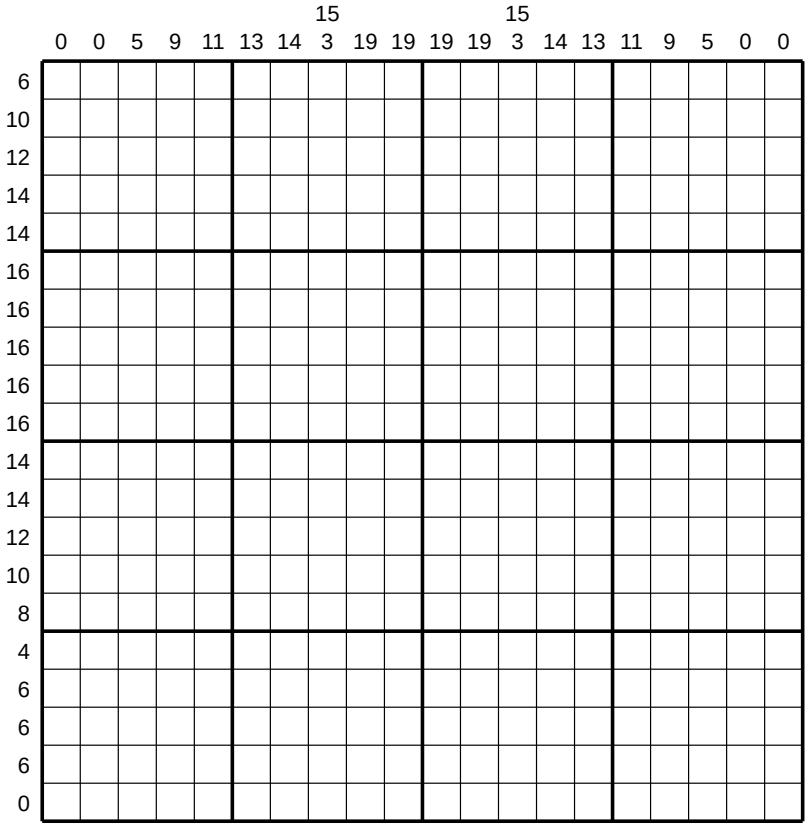
Sheet 9

15×15 · ★★


5 7 8 3 4 3 6 10 7 3 11 7 3 10 3 6 3 4 8 7 5
9
13
15
3 5 3
3 5 3
3 5 3
15
5 1 5
11
9
1 3 1
1 1
0
0
0

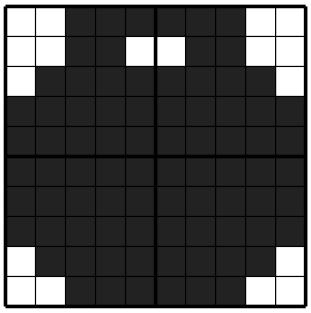
Sheet 10

20×20 · ★★★

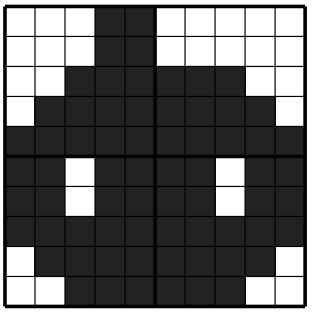


Answer key

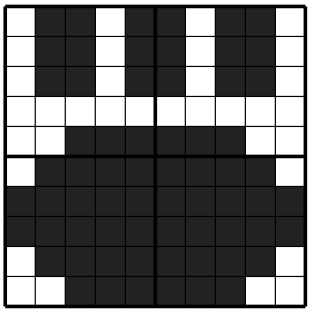
Sheet 1 — lantern



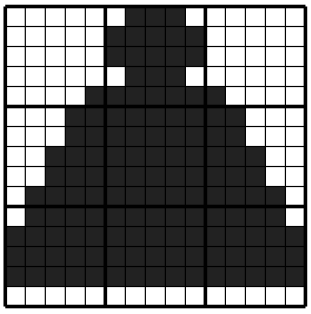
Sheet 2 — clock



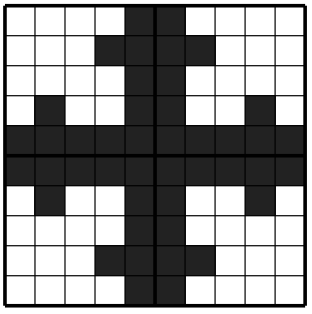
Sheet 3 — paw



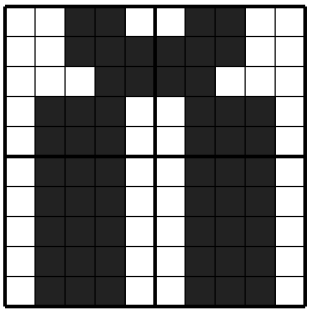
Sheet 4 — snowman



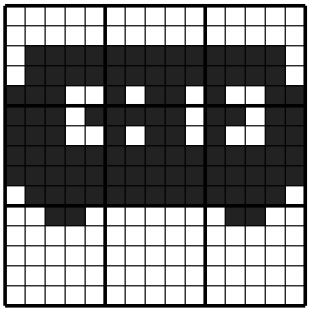
Sheet 5 — snowflake



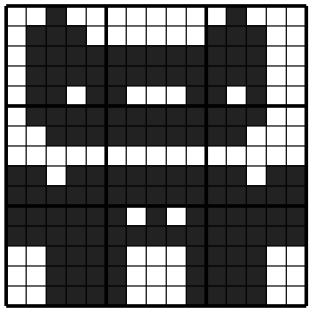
Sheet 6 — gift



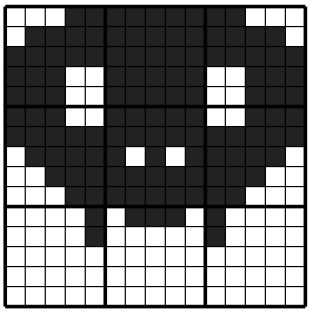
Sheet 7 — gamepad



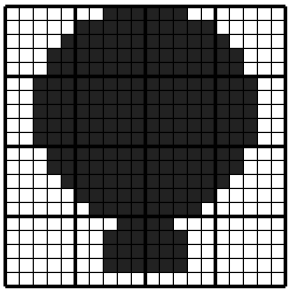
Sheet 8 — robot



Sheet 9 — alien



Sheet 10 — hot air balloon



When the class asks for more.

These ten are free and always will be. Pixel Logic vol. 1 is 100 other picture nonograms held to the same rule — 40 at 10×10, 35 at 15×15, 25 at 20×20, every one of them solver-verified to close on row-and-column logic alone, with exactly one solution. Printable at home on A4, one puzzle per page, answer key included.

blobsmith.lbwma.com/nonograms-in-the-classroom