Vanishing Squares

PLAYER SHEET - no solutions | A4 | v1.0.0

2-6 players, with an adult host | Suggested ages 9-12 | Plan 20-30 minutes

Investigate how many squares survive when dots disappear from a grid. A square is counted by its four corner dots, so a tilted square counts too. Your team records corner labels to avoid counting a square twice. Only pencil marks are removed; no cutting or physical counters are required.

Set up and play

One player sheet per team, pencils and an eraser. Print in black and white at 100% / actual size. No cutting, folding, props or account required. Keep the host guide separate.

1. Draw nine equally spaced dots in a 3x3 grid, labelled A B C across the top, D E F across the middle, and G H I along the bottom.

2. Count a square whenever four remaining dots form its corners. Imaginary sides are allowed, a side may pass through another dot, and dots inside a square do not matter.

3. Count each set of four corners once. Include tilted squares, but exclude non-square rectangles and diamond shapes whose corners do not have right angles.

Warm-up: count the full grid

With all nine dots present, list every square by its four corner letters.

A	B	C
D	E	F
G	H	I

Round 1: erase the centre

Cross out E. How many squares remain? List them; squares may surround a missing dot.

A	B	C
D	x	F
G	H	I

Round 2: erase a corner instead

Start again with the full grid. Cross out A only. Which squares remain?

x	B	C
D	E	F
G	H	I

Final: two opposite corners vanish

Restore the grid, then cross out A and I. List all surviving squares and explain why your list is complete.

x	B	C
D	E	F
G	H	x

Finish together

Finish by listing every surviving square in the final position. Another player checks the list against the original six squares, crossing out only those that use a removed dot.

Mechanism reference: Project Gutenberg 49137, THE SIX SQUARE PUZZLE.. New session instructions and examples.

Age and time are planning estimates. No child playtest or physical print trial is claimed.