## Other covering shapes

## http://topdrawer.aamt.edu.au/Reasoning/Big-ideas/Same-and-different/Imagining-missing-elements/Covered-by-H

Use of the following shapes is suggested for Years F-10. Enable and extend individual students by choosing an easier or harder shape as necessary, or open up the task by asking students to choose or design their own shapes.

| Year level | Possible shapes to use to cover parts of a 1-100 grid |
| :--- | :--- |
| F-3 | 1-square squares <br> 4-square squares <br> Rectangles placed horizontally or vertically <br> Letter L <br> Letter T |
| $4-6$ | Hollow squares or rectangles (e.g. the letter O) <br> Letter C <br> Letter F |
| $7-10$ | More complex letter shapes in stylised format to fit the grid (e.g. N, X, B, <br> P, S) <br> Numbers (calculator font) <br> Older students can be encouraged to sketch their own shapes in grid <br> format. For example: <br> - the first letter of the student's name <br> - common shapes (e.g. stylised right-angled triangle) <br> - more abstract shapes (e.g. lightning bolts or logos). |

Difficulty may be increased by placing the cover over bigger numbers. For example, an $\mathrm{F}-1$ class could use the $1-30$ range of the chart (initially at least) while other year levels could manage bigger numbers from the start.


After some practice with creating their own small grids, older students will need only to think of a starting value for the top left-hand box and rules for horizontal and vertical series. For example, starting values could be

- 1
- 4.4
- -5
- \$4.50
- $x-3$
- 3.5 kg
- 0.33
- $\frac{1}{4}$
- $4^{2}$

Once the students understand the activity, they can create puzzles for their peers or other year levels.

