Base Designs

A Base Design is a two-dimensional representation of a three-dimensional shape created using Base 10 blocks. The number in each location tells the student how many cubes to stack on each base square.

Example: Consider the following base design:

\[
\begin{array}{ccc}
2 & 2 & 1 \\
3 & 1 & 2 \\
\end{array}
\]

We can draw the three-dimensional figure using isometric dot paper.

Consider the ways to look at this three-dimensional design.

Front View  Side View (Left)  Top View

Can you think of another base design that would give the same three views?

How many 1x1x1 cubes are in the following stack?
Choose the correct base design for this shape:

Use your Base 10 blocks to construct the shape represented by the base design:

```
3 2 3 4
4 1 1 3
2 0 2 1
```

Draw the front, top, and side views.

Can you think of another base design that would give the same three views?

**Exercises:** Make a base design for each shape.

Draw the front, top, and side views for each design.