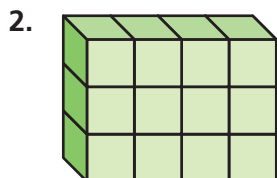
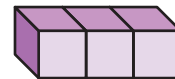


Share and Show



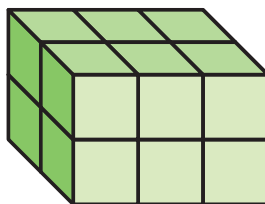
Count the number of cubes used to build each three-dimensional figure.

1. The rectangular prism is made up of _____ unit cubes.



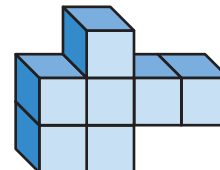
_____ unit cubes

✓ 3.



_____ unit cubes

✓ 4.



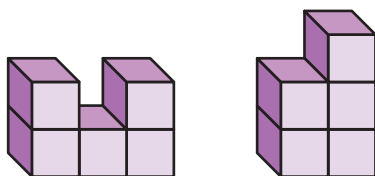
_____ unit cubes

5. **WRITE** *Math* How are the rectangular prisms in Problems 2–3 related? Can you show a different rectangular prism with the same relationship? Explain.

On Your Own

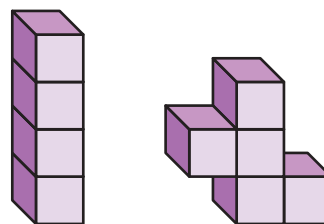
Compare the number of unit cubes in each three-dimensional figure. Use $<$, $>$ or $=$.

6.



_____ unit cubes ○ _____ unit cubes

7.



_____ unit cubes ○ _____ unit cubes

8. **MTR** Camila makes a three-dimensional figure by stacking 1 cube on top of a row of 2 cubes on top of a row of 3 cubes. Then she rearranges the cubes to form a rectangular prism. Describe the arrangement of cubes in the rectangular prism.

Connect to Art

Architecture is the art and science of designing buildings and structures.

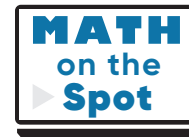
The Cube Houses of Rotterdam in the Netherlands, shown at the top right, were built in the 1970s. Each cube is a house, tilted and resting on a hexagon-shaped pylon, and is meant to represent an abstract tree. The village of Cube Houses makes a “forest.”

The Nakagin Capsule Tower, shown at the bottom right, is an office and apartment building in Tokyo, Japan, made up of modules attached to two central cores. Each module is a rectangular prism connected to a concrete core by four huge bolts. The modules are office and living spaces that can be removed or replaced.

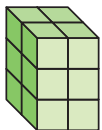
Use the information to answer the questions.

9. There are 38 Cube Houses. Each house could hold 1,000 unit cubes that are 1 meter by 1 meter by 1 meter. Describe the dimensions of a cube house using unit cubes. Remember that the edges of a cube are all the same length.

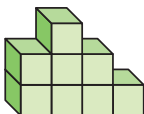
10. The Nakagin Capsule Tower has 140 modules, and is 14 stories high. If all of the modules were divided evenly among the number of stories, how many modules would be on each floor? How many different rectangular prisms could be made from that number?



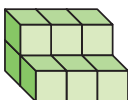
11. Match the figure with the number of unit cubes that would be needed to build each figure. Not every number of unit cubes will be used.



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- 6 unit cubes
- 7 unit cubes
- 8 unit cubes
- 9 unit cubes
- 10 unit cubes
- 12 unit cubes