

Cuboids

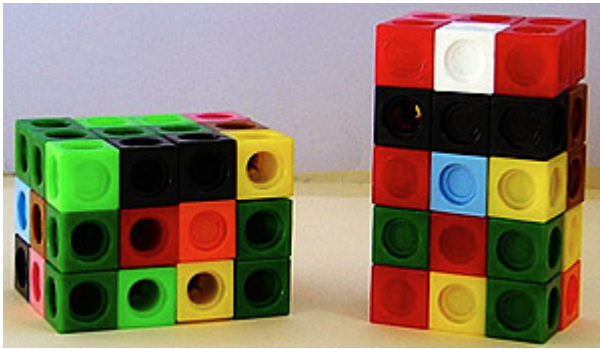
Annotation

Susie works out and compares the volume of each of two cuboids by correctly calculating the number of cubes in one layer, and adding each layer to get the total. She understands that the structure of the cuboid includes some unseen cubes in the layered arrays.

Problem: Cuboids

The teacher shows the student two cuboids and asks:

Which cuboid has the greater volume or takes up more space?



Student Response

A.

$$3 \times 4 = 12$$
$$12 + 12 + 12 = 36$$

B.

$$3 \times 5 = 15$$
$$15 + 15 = 30$$

Susie: A.

Teacher: How did you work that out?

Susie: There are 12 cubes in this layer (pointing to the top layer). And there are three layers, so that's $12 + 12 + 12$, which is 36.

Teacher: Could you have counted them all?

Susie: No, because some are in the middle that you can't see.