Volume – counting cubes

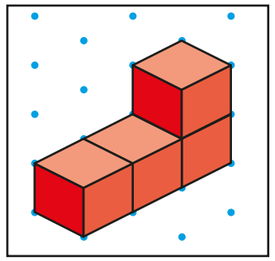
1 Use seven cubes to make three different shapes.

Each shape must use all the cubes.

2 How many cubes are needed to make each shape?

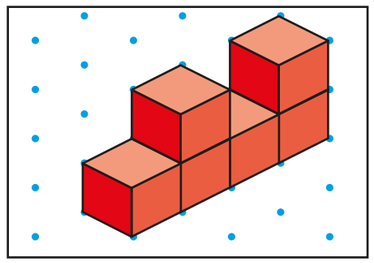
There are no hidden cubes.

a)



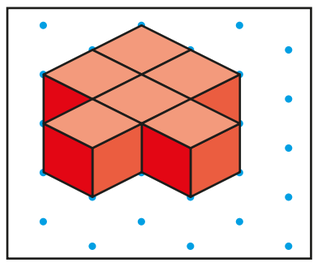
☐ cubes

c)



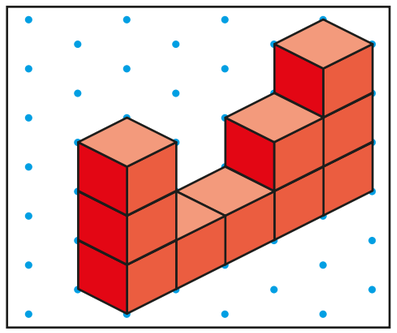
☐ cubes

b)



☐ cubes

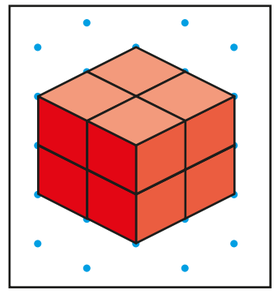
d)



☐ cubes

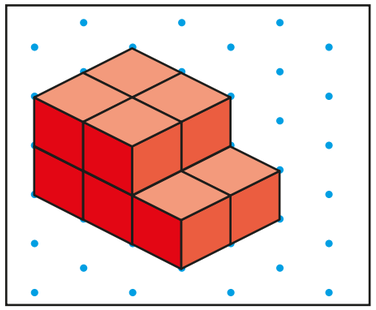
3 How many cubes are needed to make the following shapes?

a)



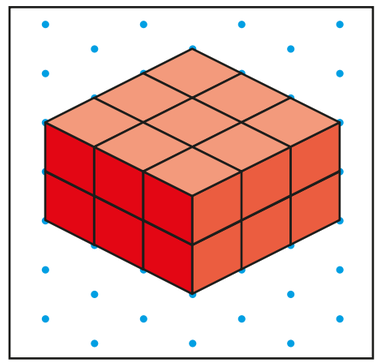
☐ cubes

d)



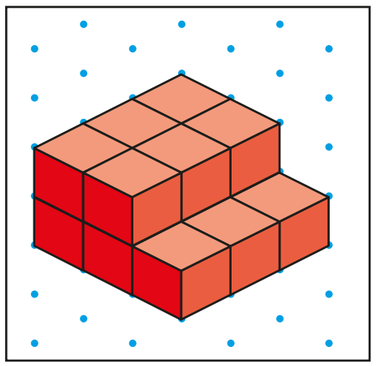
☐ cubes

b)



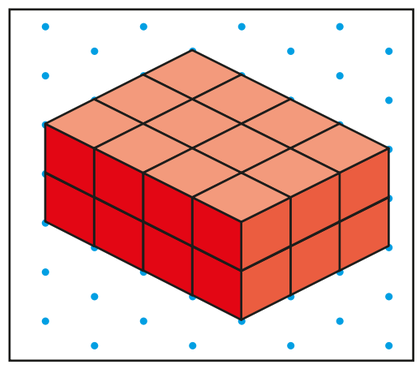
☐ cubes

e)



☐ cubes

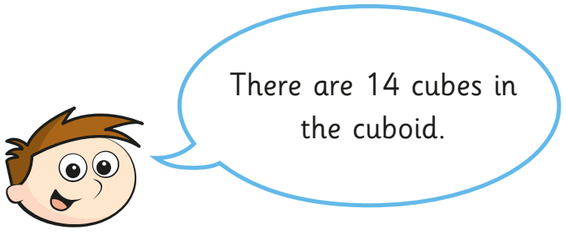
c)

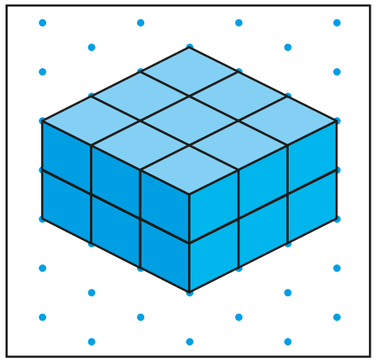


☐ cubes

Discuss the method you used with a partner.

4

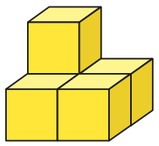




Explain Teddy's mistake.

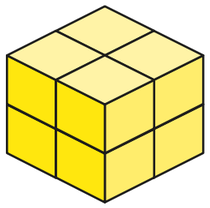
5 If one cube is worth 1 cm^3, what are the volumes of the shapes?

a)



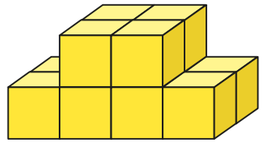
volume = ☐ cm^3

b)



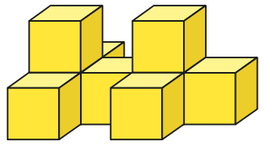
volume = ☐ cm^3

c)



volume = ☐ cm^3

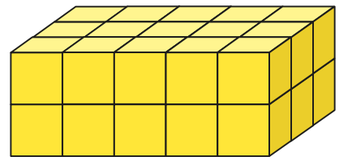
d)



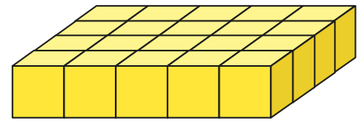
volume = ☐ cm^3

6 Here are two cuboids made of 1 cm^3 cubes.

A



B



Which shape has the greater volume? _____

Show all your working to prove your answer.

7 A shape has a volume of 24 cm^3

Make two possible shapes from cubes and then draw them.