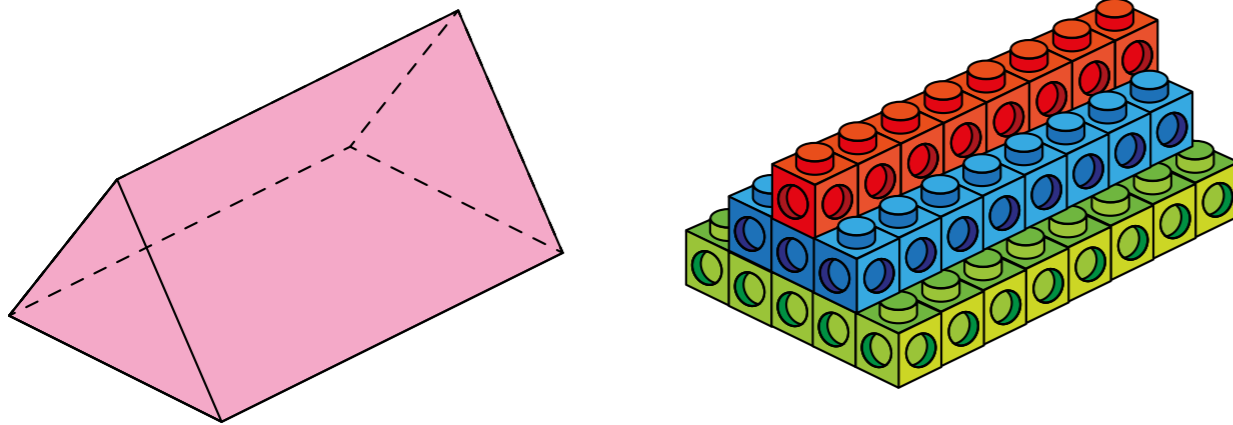# Estimate volume

1 Rosie is using cubes to estimate the volume of a triangular prism.
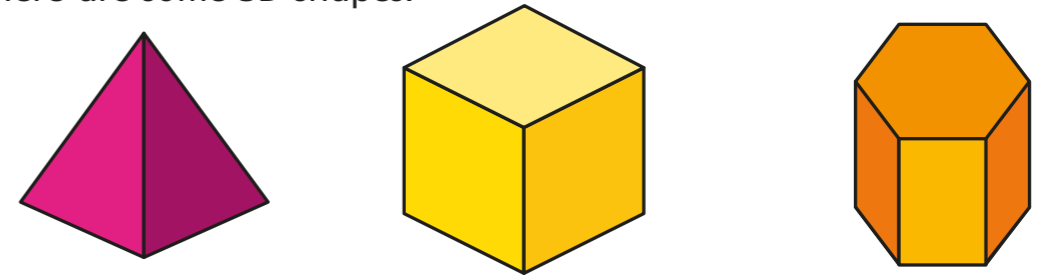

a) Why do you think Rosie stacked her cubes like this?

b) The volume of each cube is 1 cm³

Work out an estimate for the volume of the triangular prism.

Show your workings.

volume ≈ [ ] cm³

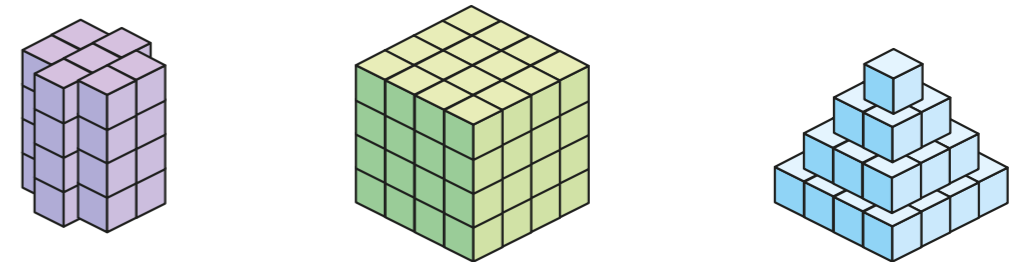c) Why is the answer only an estimate?

_____

_____

d) Do you think the estimate is more or less than the actual volume?
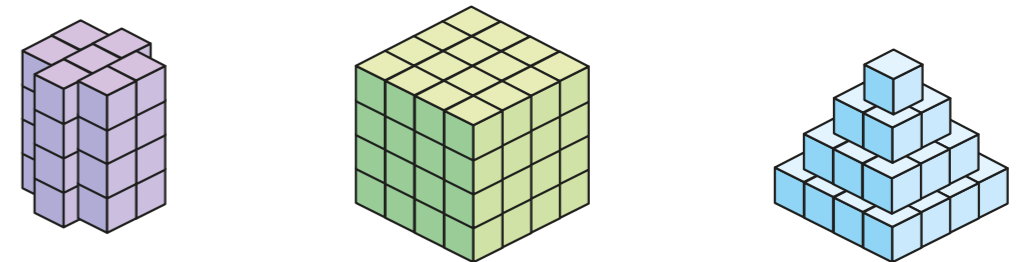
2 Here are some 3D shapes.

Rosie uses cubes to estimate the volume of each shape.

Each cube has a volume of 1 cm³

a) Tick the representation that will give Rosie the best estimate for the volume of the cube.

Estimate the volume of the cube. [ ] cm³

b) Tick the representation that will give Rosie the best estimate for the volume of the hexagonal prism.

Estimate the volume of the hexagonal prism. [ ] cm³

c) Tick the representation that will give Rosie the best estimate for the volume of the square based pyramid.
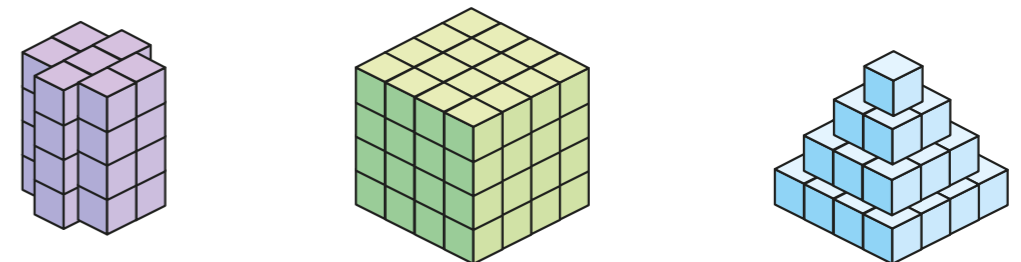
Estimate the volume of the square based pyramid. [ ] cm³

3 Jack has used cubes to estimate the volume of a cylinder.

Each cube has a volume of 1 cm³
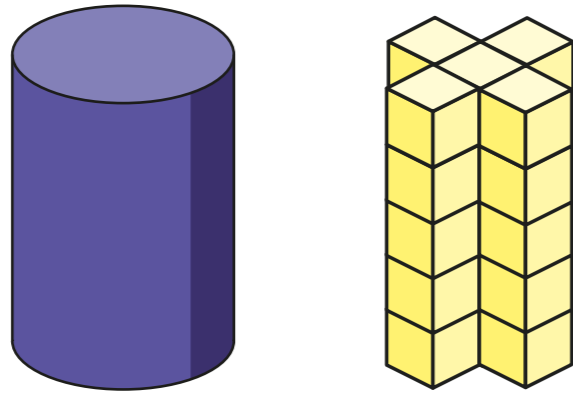
a) Estimate the volume of the cylinder.

volume ≈ ☐ cm³

b) Will the actual volume be greater than or less than your estimate?

_____

Explain your answer.

_____

_____

4 Use cubes to estimate the volume of objects in your classroom.
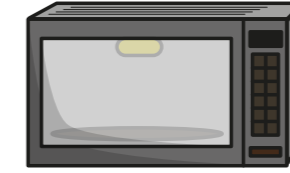
Record some of your answers here.

_____ ≈ ☐ cubes   _____ ≈ ☐ cubes

_____ ≈ ☐ cubes   _____ ≈ ☐ cubes

Compare answers with a partner.

5 Match the object to its approximate volume.
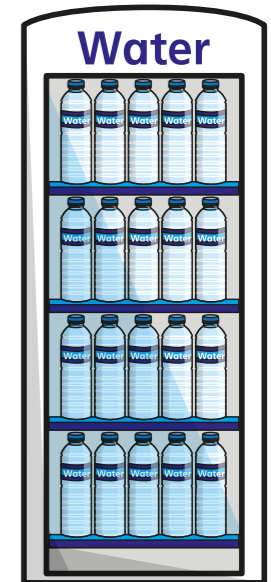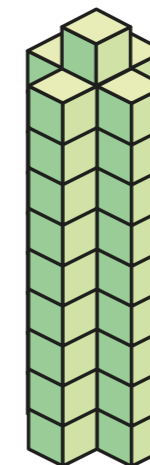
| 330 cm³ | 33,000 cm³ | 330,000 cm³ |

How did you decide?

6 A shopkeeper is estimating the volume of a fridge.

The fridge holds 40 bottles of water.

The shopkeeper uses cubes to estimate the volume of one bottle of water.

Each cube has a volume of 10 cm³

Water

Estimate the volume of the fridge.

volume ≈ ☐ cm³

Does this mean that all fridges have the same volume?