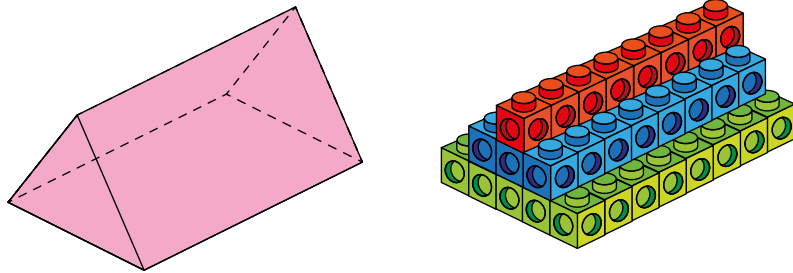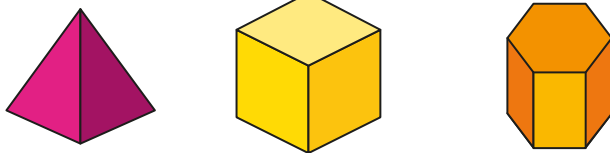**1** Rosie is using cubes to estimate the volume of a triangular prism.

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.

c) Why is the answer only an estimate?

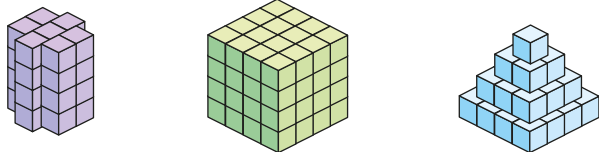d) Do you think the estimate is more or less than the actual volume?

**2** Here are some 3D shapes.

Rosie uses cubes to estimate the volume of each shape.

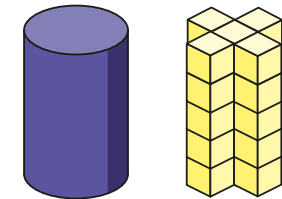Each cube has a volume of 1 cm³

a) Which representation will give Rosie the best estimate for the volume of the cube?

Estimate the volume of the cube.

b) Which representation will give Rosie the best estimate for the volume of the hexagonal prism?

Estimate the volume of the hexagonal prism.

c) Which representation will give Rosie the best estimate for the volume of the square based pyramid?

Estimate the volume of the square based pyramid.

**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.

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.

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?

**b)** Which representation will give Rosie the best estimate for the volume of the hexagonal prism?

Estimate the volume of the hexagonal prism.

**c)** Which representation will give Rosie the best estimate for the volume of the square based pyramid?
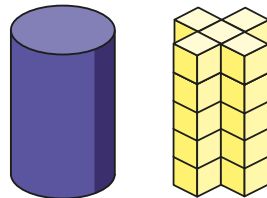
Estimate the volume of the square based pyramid.

**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.

**b)** Will the actual volume be greater than or less than your estimate?
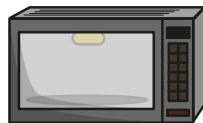
Explain your answer.

**4** Use cubes to estimate the volume of objects in your classroom.

Record some of your answers.

Compare answers with a partner.

**5** Match the object to its approximate volume.

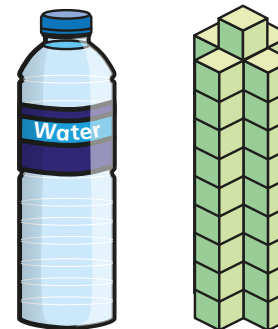| 330 cm³ | 33,000 cm³ | 330,000 cm³ |

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

Estimate the volume of the fridge.

Does this mean that all fridges have the same volume?

**Water**