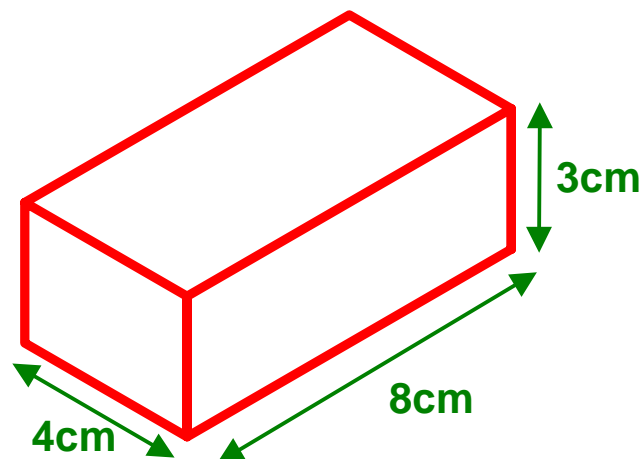




INVESTIGATION



60cm Cuboids



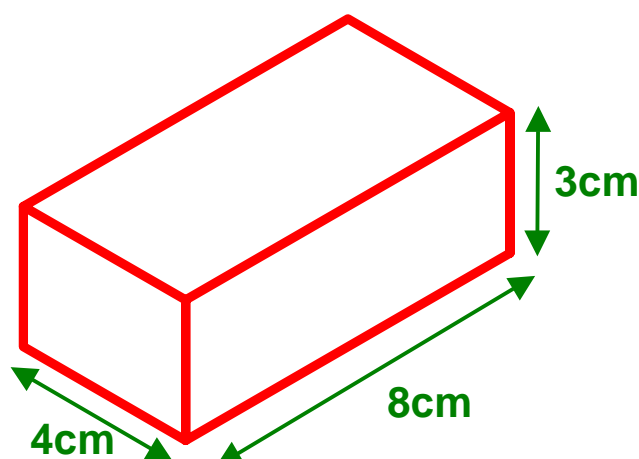
MathSphere

60cm Cuboids

Jenny has 60cm of stiff wire.

She wants to make a cuboid using all 60cm of the wire.

Here is one way she can do this:



Have you thought of checking that this cuboid uses 60cm of wire?

The volume of this cube is $8 \times 3 \times 4 = 96 \text{ cm}^3$.

Investigate different cuboids that use 60cm of wire and find the cuboid with the largest volume.

Answer Guide

This is a simple investigation in essence, giving practice in perimeters and volumes, but children need to record their results well or they will become lost in a maze of calculations.

One way to do this is to focus on one edge and gradually increase the length of this edge by one centimetre at a time. This way it is easier to see how much wire is left for the other two sides.

The answer to the maximum volume question is a cube of side 5cm. This has a volume of 125 cm^3 .