Surface Area

JustMaths

How to . . .

Here is a cuboid ← *has 6 faces*
each face is a rectangle . . .

Diagram **NOT** accurately drawn
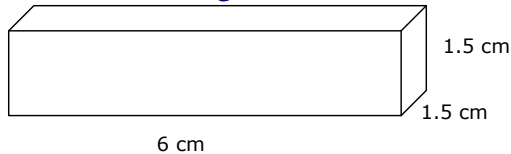
1.5 cm
1.5 cm
6 cm

The opposite faces of the cuboid have the same area

The cuboid is 6 cm by 1.5 cm by 1.5 cm.

Work out the total surface area of the cuboid

Front and back. = [rectangle] 6cm × 1.5   Area = 6 × 1.5 ← *2 of these*
= 9

Top and Bottom = [rectangle] 6cm × 1.5   Area = 6 × 1.5 = 9 *& 2 of these*

(I've drawn them like this but they are really rectangles)

End faces = [square] 1.5 × 1.5   Area = 1.5 × 1.5 = 2.25

__40.5__ cm² **(3)**

Total surface area = (2 × 9) + (2 × 9) + (2 × 2.25)
= 40.5

Now have a go yourself . . . .

Q1.

3 cm
5 cm
4 cm
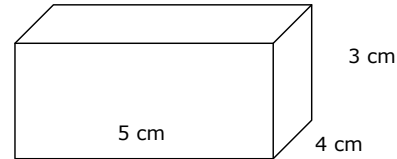
Calculate the total surface area of the cuboid

Q2.

2 cm
10 cm
600 mm
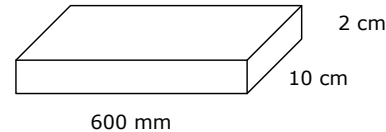
Calculate the total surface area of the cuboid - state clearly the units of your answer.

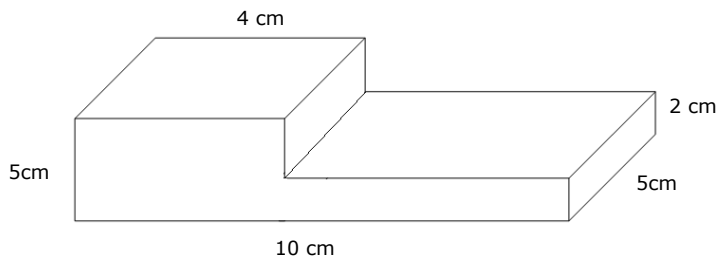**Q3.** What is the surface are of cuboids with the dimensions:

- 6 cm, 7 cm and 8 cm

- 0.5 cm, 30 cm and 10 cm

- 12 m, 300 cm and 7 m

CHALLENGE

Q4. A cuboid has a surface area of 174 cm² - can you find its height if its width is 3 cm and its length is 5cm. Is there just one solution?
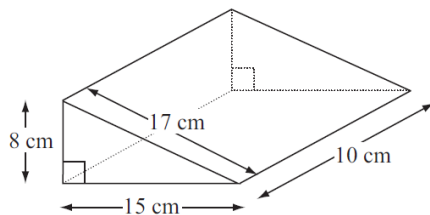
Exam Questions

Q1. Work out the total surface area of the L shaped prism.

4 cm

2 cm

5cm

5cm

10 cm

(4)

Slightly different .. But have a go!

Q2. Work out the total surface area of this triangular prism

17 cm

8 cm

10 cm

15 cm

(4)

Ready to be marked ?