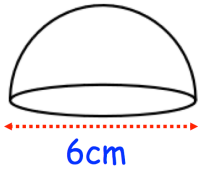


24th September

Corbettmaths



The paperweight is a hemisphere with diameter 6cm.

The glass has a density of 3g/cm^3 .

Calculate the mass of the paperweight.

There are x apples in a crate.
4 of the apples are bad.

Fiona chooses two apples from the crate, without replacement.
The probability she selects two bad apples is $\frac{1}{11}$

Prove

$$x^2 - x - 132 = 0$$

Find x , the number of apples in the crate.

The line l_1 has equation $y = 4x - 10$.
The line l_2 has equation $x + y = 20$

The lines l_1 and l_2 intersect at the point C.

The lines l_1 and l_2 cross the line $y = 2$ at the points A and B.

Find the area of triangle ABC.

Given that

$$16^x = 4^{10-x}$$

Find the value of x