

A circle has a radius, diameter and circumference.

The diameter of a circle is a straight line, which passes through its centre.

But the circumference is curved, so it's harder to measure. The circumference can be calculated using the diameter times pi.

Pi is a number that can't be written exactly like other numbers. Pi is approximately three point one four.

Which means the circumference will always be, three and a bit times the diameter.

This circle's diameter is 12 centimetres.

Calculate the circumference.

Pi is three point one four.

The diameter is 12cm. three point one four times 12 is 37.69.

So the circumference is 37.69 centimetres.

Pi can also be used to calculate the area of a circle, using the radius, or half the diameter.

The formula for the area, is pi R squared, which is three and a bit times the radius squared.

Calculate the area using pi R squared.

The radius is half the diameter, in this case 6cm.

So, to calculate the area: Pi is three point one four. R squared is thirty-six. Pi times 36 is 113.04.

So, the area is 113.04 square centimetres.

For the area of a semi-circle, do exactly the same, just halve it