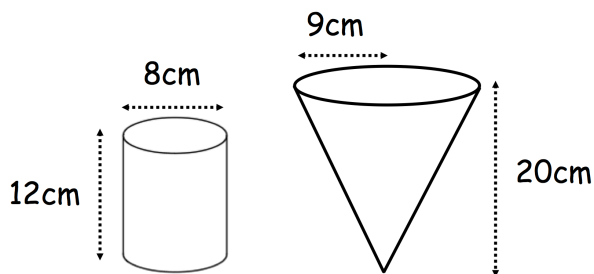


The two sectors have the same area.
Find x

The curve C has equation
 $y = x^2 + ax + b$

The minimum point of C has
coordinates $(-4, 6)$

Find a and b



How long does it take to fill the cone?

Shown above are two empty
containers.

The cylinder is filled with water at a
constant rate.
It takes 30 seconds to fill the container.

The cone is filled with water at the
same constant rate.

The cone is emptied and then the water
from the cylinder is poured into the cone.
How many centimetres below the top of
the cone does the water reach?

Solve $3x^2 + 5x - 105 < 2x^2 - 3x$