30th January

Corbettmaths

Make y the subject of the formula

$c = w - 4ay^3$

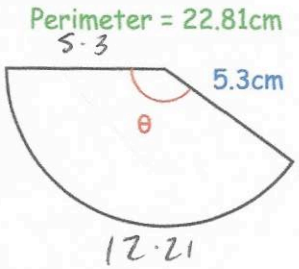
$c + 4ay^3 = w$

$4ay^3 = w - c$

$y^3 = \frac{w-c}{4a}$

$y = \sqrt[3]{\frac{w-c}{4a}}$

Calculate θ

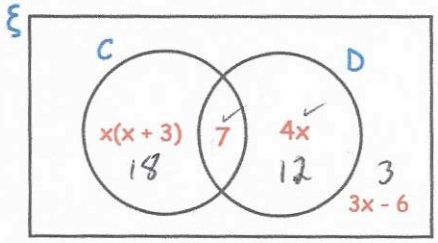


$22.81 - 5.3 - 5.3 = 12.21$

$\frac{\theta}{360} \times \pi \times d = 12.21$

$\frac{\theta}{360} \times \pi \times 10.6 = 12.21$

$\theta = 131.9965034 \approx 132°$



ξ = 40 students
C = students who own a cat
D = students who own a dog

A student is chosen at random.
They own a dog.
Work out the probability that they own a cat

$x(x+3) + 7 + 4x + 3x - 6 = 40$

$x^2 + 3x + 7 + 4x + 3x - 6 = 40$

$x^2 + 10x + 1 = 40$

$x^2 + 10x - 39 = 0$

$(x+13)(x-3) = 0$

$x = -13$ (×) $\quad x = 3$ (✓)

$P(C|D) = \frac{7}{19}$

State the coordinates of the vertex of the curve $y = x^2 + 10x + 21$

$(x+5)^2 - 25 + 21$

$(x+5)^2 - 4$

$(-5, -4)$