Q2 let f be a real valued differentiable function on R such that $f(1) = 1$. If the y-intercept of the tangent at any point $P(x,y)$ on the curve $y = f(x)$ is equal to the cube of the absissca of P, then the value of $f(-3)$ is equal to

In Q1 we have seen $A\left[0, y - \left(\dfrac{dy}{dx}\right)x\right]$

$\hookrightarrow$ y intercept.

ATQ.

$y - \left(\dfrac{dy}{dx}\right)x = x^3$ $\Rightarrow$ solving this diff eqn we would get $y = \dfrac{-x^3}{2} + cx$

now use $f(1) = 1$ to find c.