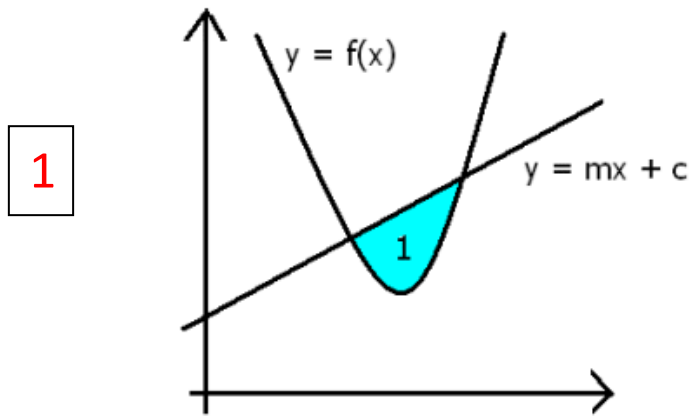
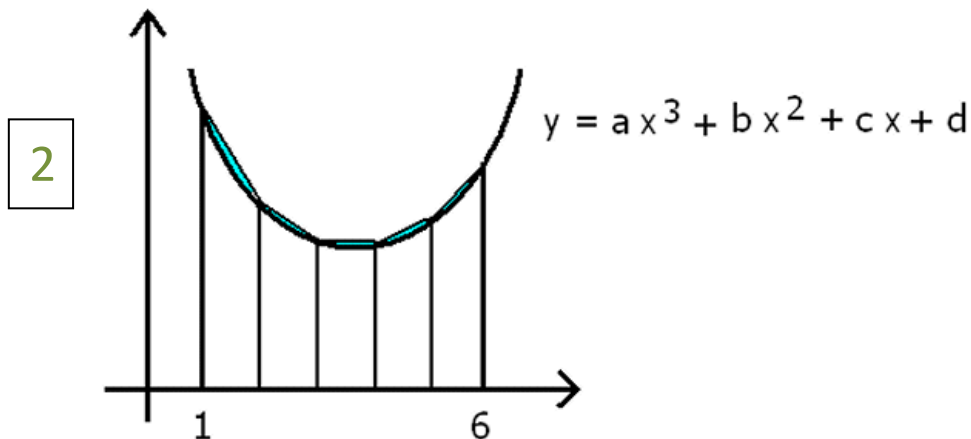


## Risp 25: The answer's 1: what's the question?

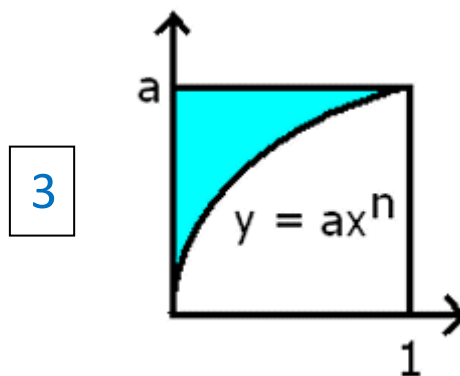


Find a possible  $f(x)$  and  $mx + c$  in the diagram above.



In the diagram above, the Trapezium Rule with five strips overestimates the area under the curve between  $x = 1$  and  $x = 6$  by exactly 1 square unit.

Find possible values for  $a$ ,  $b$ ,  $c$  and  $d$ .



If you rotate  $y = ax^n$  between 0 and 1 about the x-axis, you get volume  $V_1$ .

If you rotate  $y = ax^n$  between 0 and  $a$  about the y-axis, you get volume  $V_2$ .

If  $V_1 - V_2 = 1$ , find possible values for  $a$  and  $n$ .