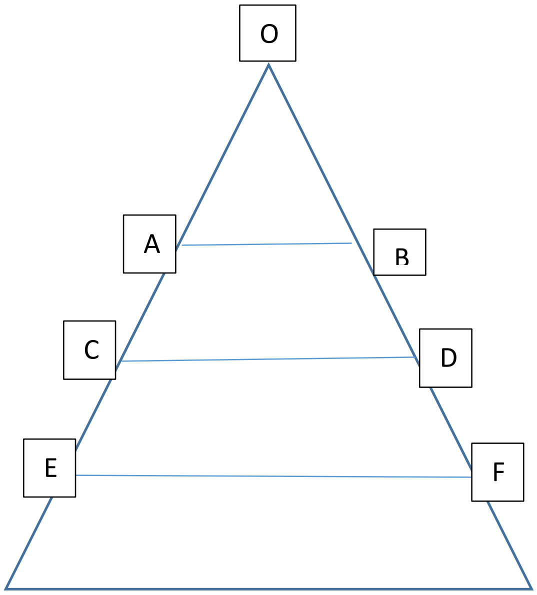

Let length OA = x.

½x^2 = Area OAB = 1

$x=2^{1/2}$

- ⇨ AB = $(x^2+x^2)^{1/2}$ = 2
- ⇨ OC = 2

Following this method but generalising, it can be shown that:

The slant Length of a given triangle here is: L = $2^{(1/2)(n+1)}$

Where (n) is the number of horizontal lines crossed (eg. Length of OA = $2^{(1/2)*(0+1)}$).

Therefore the area of a given triangle here is: $TA_n = ½L^2_n = ½*2^{n+1} = 2^n$

And finally the area of a given trapezium is: $A_n = TA_n – TA_{n-1} = 2^n-2^{n-1} = 2^{n-1}$