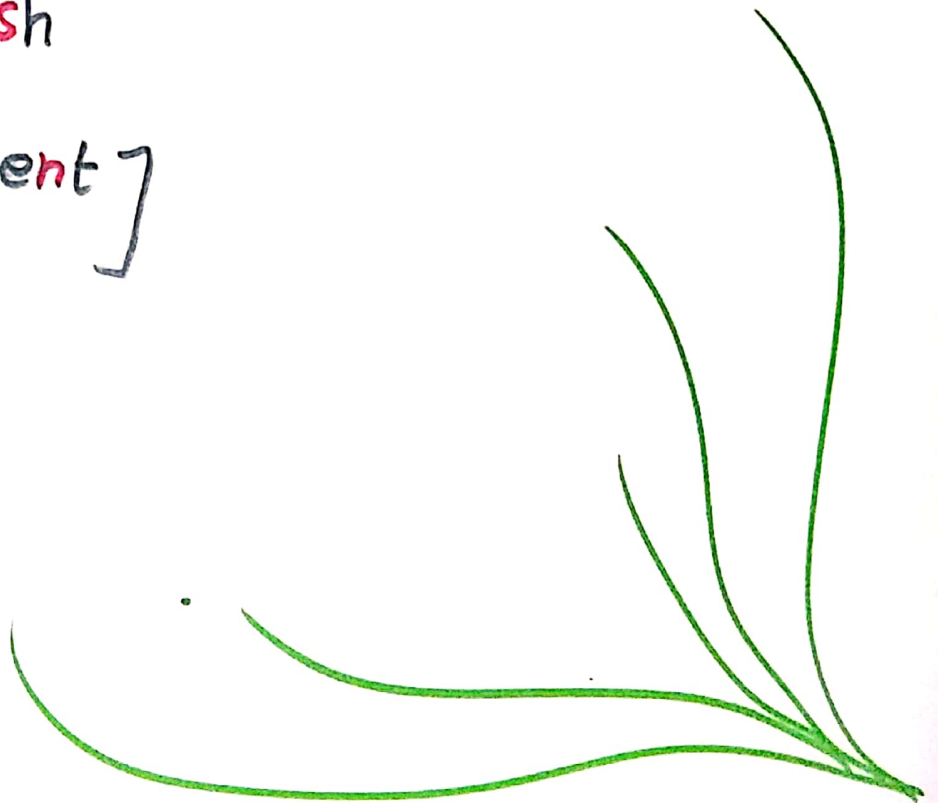


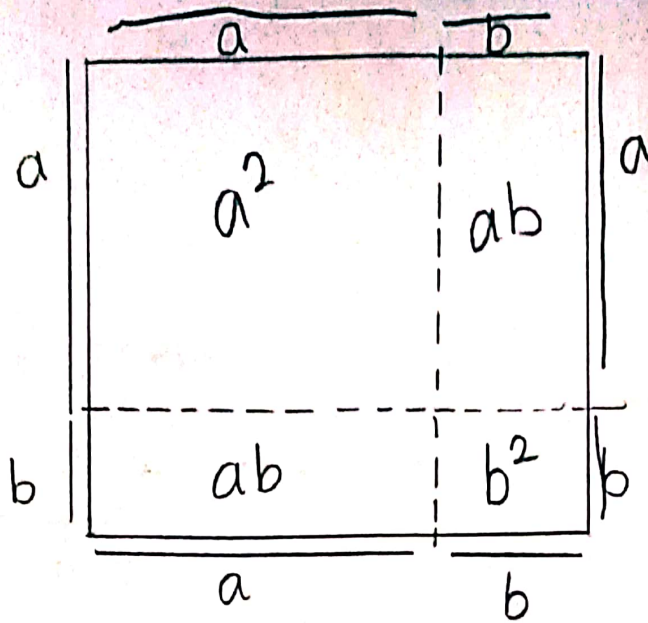
# PROJECT WORK ON MATHS

- By Anuj Sapkota  
Class; 8 'G'

- To: Akash  
Thapa  
[ Department  
of  
MATHS ]



1. Prove the expansion of  $(a+b)^2$  geometrically.  
Note: Include derivation and figure.



- Area of square<sub>1</sub> =  $(a+b) \times (a+b)$  [As,  $A = l \times b$ ]  
 $= (a+b)^2$

- Area of square<sub>2</sub> =  $a^2 + ab + ab + b^2$   
 $= a^2 + 2ab + b^2$

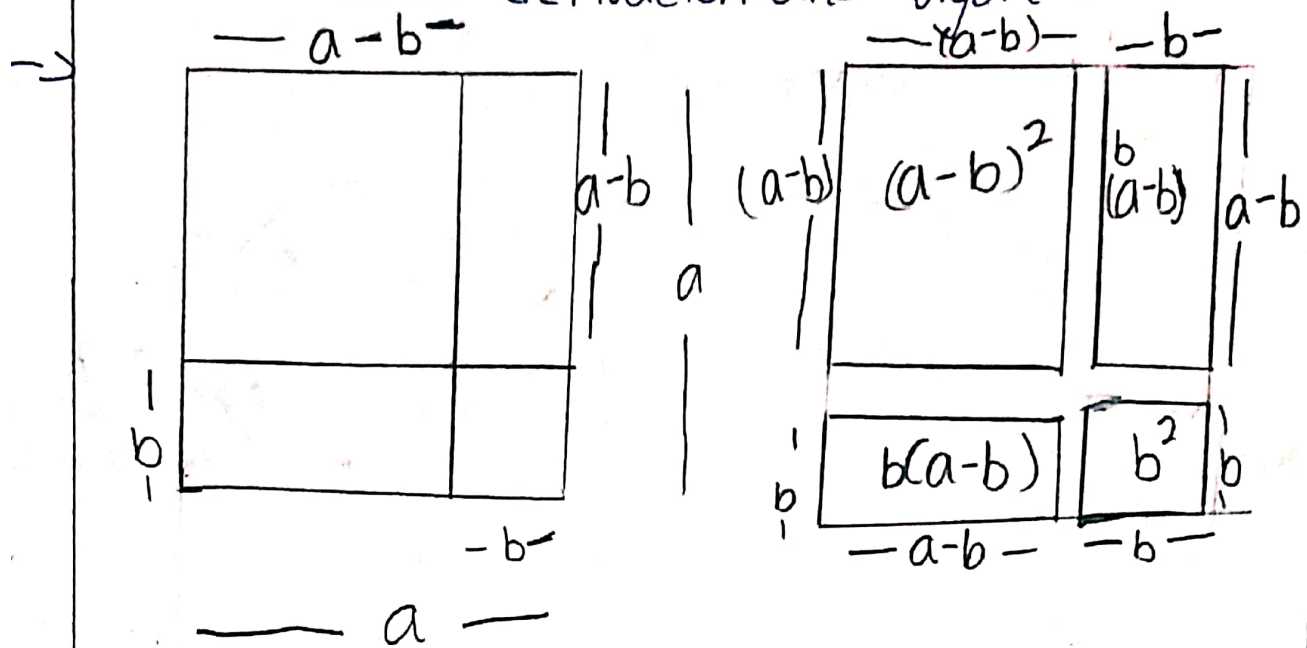
Since,

Area of square<sub>1</sub> = Area of square<sub>2</sub>

$\therefore (a+b)^2 = a^2 + 2ab + b^2$

Proved

2. Prove the expansion of  $(a-b)^2$  geometrically.  
 Note: Include derivation and figure.



Area of square =  $a^2$

Now,

$$a^2 = (a-b)^2 + b(a-b) + b(a-b) + b^2$$

$$\text{or, } a^2 - b(a-b) - b(a-b) - b^2 = (a-b)^2$$

$$\text{or, } a^2 - 2b(a-b) - b^2 = (a-b)^2$$

$$\text{or, } (a-b)^2 = a^2 - 2b(a-b) - b^2$$

$$\text{or, } (a-b)^2 = a^2 - 2ab + 2b^2 - b^2$$

$$\therefore \underline{(a-b)^2 = a^2 - 2ab + b^2}$$

Hence proved