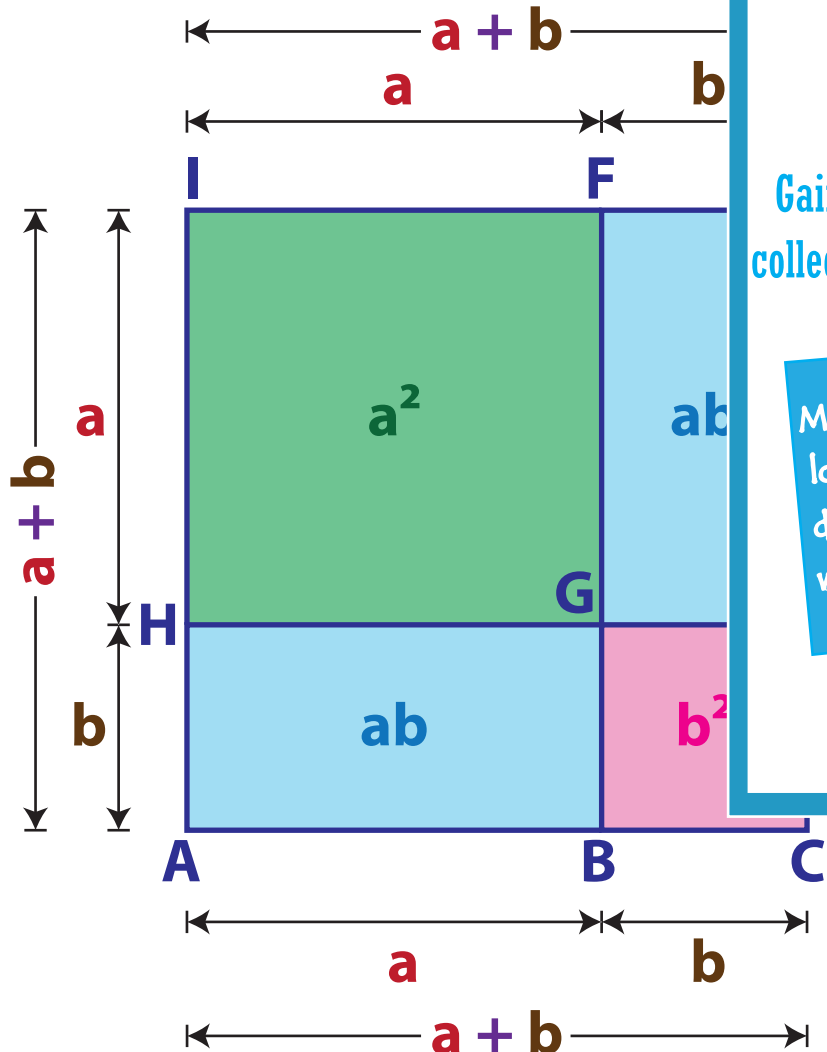


Name : \_\_\_\_\_

# ALGEBRAIC IDENTITY - SQUARE OF A BINOMIAL

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



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Area of ACEI =  $(a + b)^2$  .....(1)

Area of FGHI =  $a^2$  .....(2)

Area of rectangle ABGH =  $ab$  .....(3)

Area of rectangle DEFG =  $ab$  .....(4)

Area of BCDG =  $b^2$  .....(5)

From (3) and (4) and (5) we have,

Area of FGHI + Area of ABGH + Area of DEFG + Area of BCDG

$$= a^2 + ab + ab + b^2$$

$$= a^2 + 2ab + b^2$$
 .....(6)

From (1) and (6) we have,

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