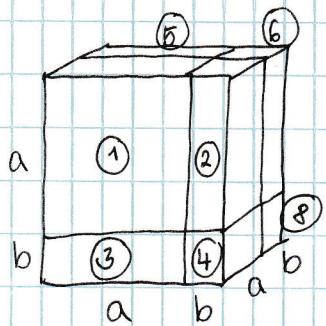


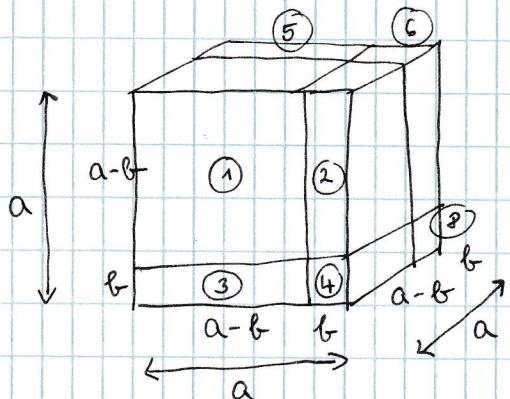
$$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$$



$$V = (a+b)^3$$

$$V = \underset{1}{a^3} + \underset{2}{a^2b} + \underset{3}{a^2b} + \underset{4}{ab^2} + \underset{5}{ab^2} + \underset{6}{b^3} + \underset{7}{ab^2} + \underset{8}{a^2b} = \\ = a^3 + 3a^2b + 3ab^2 + b^3$$

$$(a-b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$$



$$V = a^3$$

$$V = (a-b)^3 + \underset{1}{(a-b)^2b} + \underset{2}{(a-b)^2b} + \underset{3}{(a-b)b^2} + \underset{4}{(a-b)b^2} + \underset{5}{b^3} = \\ = (a-b)^3 + 3(a-b)^2b + 3(a-b)b^2 + b^3 = \\ = (a-b)^3 + 3a^2b - 6ab^2 + \cancel{3b^3} + 3ab^2 - \cancel{3b^3} + b^3 = \\ = (a-b)^3 + 3a^2b - 3ab^2 + b^3$$

$$a^3 = (a-b)^3 + 3a^2b - 3ab^2 + b^3$$

$$(a-b)^3 = a^3 + 3ab^2 - 3a^2b - b^3$$