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Cube by column method

For finding the cube by column method use the following formula:-

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

In this method, first find the 2 digits of a number.

Example:

1) 32^3, so here the two digits are 3 and 2.

2) 46^3, two digits are 4 and 6.

Examples:-

1) Find 24^3.

Solution: Here two digits are 2 and 4.

a = 2, and b = 4. By using the column-method: -

Column I	**Column II**	**Column III**	**Column IV**
a^3	**3 x a^2 x b**	**3 x a x b^2**	**b^3**
$2^3 = 8$ + 5	3 x 2^2 x 4 = 48 + 10	3 x 2 x 4^2 = 96 + 6	$4^3 = 64$
13	58	102	4
13	8	2	4

$\therefore 24^3 = 13824$

2) Find 42^3.

Solution: Here two digits are 4 and 2.

a = 4, and b = 2. By using the column-method: -

Column I	**Column II**	**Column III**	**Column IV**
a^3	**$3 \times a^2 \times b$**	**$3 \times a \times b^2$**	**b^3**
$4^3 = 64$ + 10	$3 \times 4^2 \times 2 = 96$ + 4	$3 \times 4 \times 2^2 = 48$ + 0	$2^3 = 8$
74	100	48	8
74	0	8	8

$\therefore 42^3 = 74088$

Finding the cube by column method:-

a) 82^3

b) 67^3

c) 95^3

d) 61^3

e) 49^3