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Division Method Of "Cube-Root"

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Abstract:

Till today, there is no method for finding cube-root of the following:

- *number which is not a full cube ie,(2,3….7),(8,9….26),(28,29…..63)……so on*
- *number with decimal ie, (64.235, 8.012 , 100.25 …..so on)*

If the number is a full cube(ie, x^3),We could somehow find the cube-root(ie, x) , because

by multiplying thrice the cube-root ie x, we get x^3.

But, now onward, with the help of this division method, we can find cube-root of any number.

Keywords: *Any number, correct cube-root, division method, easy, number with decimal also.*

1.Introduction

We all know the division method of finding square-root. Cube-root is equally important as the square-root. But,there is no such method of finding a cube-root as yet. It has been a panic, whenever a person is asked to find the accurate cube-root of 2,3,9,10,11.5 etc.

1.1.Division Method

- First of all, recall division method and its four parts, ie, Dividend, Divider, Quotient & Reminder.

1.2.Rules For Finding A Cube Root By Division Method

- Make group of three digits, for the cube number ie, Dividend (starting from left to right ,for the digits after decimal and vice versa).
- There will be two columns for divider ie, col. A & col. B.
  Col. A will help to find expected divider(ED) & main divider(MD) in col. B. 1st ED will be zero.
  EDs are always in hundred, ie, put two nos of zero to the right side of EDs.
  This will help to find the expected digit of quotient(as normally assessed in division method).
- Only MDs are multiplied by the digit of quotient and the result is placed below the dividend, to find the reminder(as normally done in division method).
  Next group will be written to the right side of the reminder(as normally done in division method).
- The digit of the quotient will be added twice in col. A and their product will be added in col. B to find MDs & EDs.
- Find first digit of quotient, in the division method,for the first group by assessing. (Except in the manner, we assess by multiplying, the digit of the quotient twice in case of a square-root). Here we will assess by multiplying thrice.
- 2nd digit of quotient will be placed to the right side of the added number in Col. A, and process will be followed as said in point no. 4.
- The quotient will be the required cube-root.

FIND THE CUBE -ROOT OF   "1728 "

	DIVIDER		CUBE NUMBER (DIVIDEND)	QUOTIENT (CUBE-ROOT)
	COL."A"	COL."B"		
EXPECTED DIVIDER AT COL. "B" >>>>>	1	000	1 728	12
	+1..> product.>	+1		
MAIN DIVIDER AT COL. "B" >>>>>>	2	1	-1	
	+1 .> Product.>	+2	X 728	
EXPECTED DIVIDER AT COL. "B" >>>>>	32	3 00		
	+2 .> product.>	+64		
MAIN DIVIDER AT COL. "B" >>>>>>	34	364	-728	
			xxx	
EXPECTED DIVIDER AT COL. "B" >>>>>				
MAIN DIVIDER AT COL. "B" >>>>>>				
EXPECTED DIVIDER AT COL. "B" >>>>>				
MAIN DIVIDER AT COL. "B" >>>>>>				
EXPECTED DIVIDER AT COL. "B" >>>>>				
	RESULT :- CUBE-ROOT OF "1728" IS "12".			

Table 1

2.Conclusion

2.1.Advantage

• No more panic about cube-root.

• Beneficial to scientists,mathematical scholars & other fraternity of education lovers.

2.2.Limitation

• No limitation at all.

2.3.Possible Applications

• It should be included in the secondary education.

• It is to be published in different types of journals related to research in the field of Maths & Science.

• Each and every student of today will know this process and their future programmes of tomorrow will be benefited.

3.Reference
Nil