

TARTAGLIA'S ORIGINAL POEM

Quando chel cubo con le cose appresso
Se aquaglia á qualche numero discreto
Trouan duo altri differenti in esso

Dapoi terrai questo per consueto
Che"llor productto sempre sia eguale
Alterzo cubo delle cose neto,

El residuo poi suo generale
Delli lor lati cubi ben sottrati
Varra la tua cosa principale.

In el secondo de cotestiatti
Quando chel cubo restasse lui solo
Tu osseruarai quest'altri contratti,

Del numer farai due tal part'á uolo
Che luna in l'altra si produca schietto
El terzo cubo delle cose in stolo

Delle qual poi, per communprecetto
Torrai li lati cubi insieme gionti
Et cotal somma sara il tuo concetto.

El terzo poi de questi nostri conti
Se solue col secondo se ben guardi
Che per natura son quasi congionti.

Questi trouai, non con passi tardi
Nel mille cinquecentè, quatroe trenta
Con fondamenti ben saldè gagliardi

Nella citta dal marintorno centa.

TARTAGLIA'S POEM TRANSLATED INTO ENGLISH

When the cube and the things together
Are equal to some discrete number,
Find two other numbers differing in this one.

Then you will keep this as a habit
That their product should always be equal
Exactly to the cube of a third of the things.

The remainder then as a general rule
Of their cube roots subtracted
Will be equal to your principal thing.

In the second of these acts,
When the cube remains alone
You will observe these other agreements:

You will at once divide the number into two parts
So that the one times the other produces clearly
The cube of a third of the things exactly.

Then of these two parts, as a habitual rule,
You will take the cube roots added together,
And this sum will be your thought.

The third of these calculations of ours
Is solved with the second if you take good care,
As in their nature they are almost matched.

These things I found, and not with sluggish steps,
In the year one thousand five hundred, four and thirty
With foundations strong and sturdy

In the city girdled by the sea.

TARTAGLIA'S POEM TRANSLATED AND ANNOTATED

When the cube and the things together
Are equal to some discrete number,
Find two other numbers differing in this one.

$$\begin{aligned}x^3 + ax &= b \\ u - v &= b\end{aligned}$$

Then you will keep this as a habit
That their product should always be equal
Exactly to the cube of a third of the things.

$$uv = (a/3)^3$$

The remainder then as a general rule
Of their cube roots subtracted
Will be equal to your principal thing.

$$x = \sqrt[3]{u} - \sqrt[3]{v}$$

In the second of these acts,
When the cube remains alone
You will observe these other agreements:

$$x^3 = ax + b$$

You will at once divide the number into two parts
So that the one times the other produces clearly
The cube of a third of the things exactly.

$$\begin{aligned}b &= u + v \\ uv &= (a/3)^3\end{aligned}$$

Then of these two parts, as a habitual rule,
You will take the cube roots added together,
And this sum will be your thought.

$$x = \sqrt[3]{u} + \sqrt[3]{v}$$

The third of these calculations of ours
Is solved with the second if you take good care,
As in their nature they are almost matched.

$$x^3 + b = ax$$

These things I found, and not with sluggish steps,
In the year one thousand five hundred, four and thirty
With foundations strong and sturdy

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