# 竜ヶ崎第一高等学校 白幡探究 I 数学領域

槍の数と兵の数 The number of spears and the number of soldiers

## 原文 The original



キーワード Key word

・槍の数 The number of spears

•兵の数 The number of soldiers

·方程式 Equation

1年 G組 癸班

引用 見立算法規矩分等集 Mitate Sanpou Kiku Buntousvu

享保7年 A.D.1730

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# 現代語訳 Modern translation

で数と分敵含5とら足数4一ら番け五本百 けのの0分3 とと〇組うとてとず五 あと `け○足組本にと固30二つ本 る知るた兵槍 る 7 らのの不5本し数槍3 人倍配の 3分数足組減てとが06組と 総備方 0 ご法足8けがのとら百知足本〇に知 とはり〇方 14知し 筋るり そ数り、 余と90る差とになと槍り の兵前いり闻〇と の出はいにが本 °八くと加32 す。 と槍余 は数同総備に分 え00 あ闻と かるかで5ま はじ合に やの分せる。 e 1 1 0 1 ずめと 6 ま槍 て〇本と槍う 37り兵け備 つにに 05方のるに 総10か不のと 分百七

係:本橋、渡辺

## 数学的内容 Mathematical contents

 $105 \div 7 = 15$ 

15×2=30 より加えた人数は30人

②兵の固まりの数をxとすると

50x - 60 = 30x + 40

50x - 30x = 60 + 4020x = 100

x=5 より兵の固まりは5組

30x+40x=5をかけ

30×5+40=150+40 =190 槍の数は190筋

③1つの固まりの兵の数をxとすると380+370

7x + 380 = 8x - 370

8x - 7x = 380 + 370

x = 750

7x+380x=750をかけると 7×750+380=5630 よって全ての兵の数は5630人

係:古橋、松浦



### 英語訳 English translation

There are 105 spears. 7 for 2 people are distributed. It is double, and 105 is made 210 to know the number of people. It's possible to separate each 7 of those and know 30 people.

When I have every 50 spears about one set with which the turn has been bound, 60 spears remain. When I have a spear every 30 for one set, I hear that I don't have enough 40 spears. Lack is added to the rest and it's taken out with 100 to know the number of the spear and the number of sets. 30 will be reduced from 50 and it's 20. 100 is divisible, and it'll be 5 sets. 5 x 30 = 150. When 40 lacking is added, I know the number of the overall spear with 190. Enemy's way to separate. When 7 is separated minutely, 380 remains. When 7 is separated minutely, 370 isn't enough. The way to know the number of people of the overall soldier is the same way as the previous description. The soldier's number of people every bi is 750, and the number of people of the overall soldier is 5630.

係:古橋、渡辺

# 英語訳 English translation

① 105÷7=15

 $15 \times 2 = 30$  The number of people added more in 30.

When the number of the group of the soldier is made x.

50x - 60 = 30x + 40

50x - 30x = 60 + 40

20x = 100

x=5 The group of the choice soldier is 5 sets.

30x + 40x = 5

30×5+40=150+40

=190 The number of the spear is 190.

3When the soldier's number of 1 group is made

7x + 380 = 8x - 370

8x-7x=380+370x=750

7x + 380x = 750

7×750+380=5630

There fore the number of all soldier is 5630.

係:古橋、渡辺

# まとめ・今後の課題・感想

Summary • Future problem • Impression

#### まとめ

江戸時代から方程式と同じような考え方をして数を求めていたことが分かった。

I understood that I thought in a way similar to an equation from the Edo ear and found a number.

I read a sentence, and it was hard to change the language, and to make a sentence again.

#### 今後の課題

和訳をしていて分からなくて訳せない部分があったので、いろいろ調べていって、正確な訳ができるようにしたい。

Because there was a part to translate it into Japanese, and not to understand it, and not to be able to translate, I check it in various ways, and it wants to be possible for correct reason

#### 感想

文を読み取り、言語を変えてまた文を作るのが大変だった。班員で協力して取り組むことが大事だと思った。

昔からこのような複雑な方法で求めているのが、現代の今につながっていると思うと歴史を感じるし、すごいと思う。

I thought that it was important I cooperated in members, and to wrestle. I feel the history when I think that what I find by such a complicated method from old days leads in modern now and think that it is great.

班長:好川