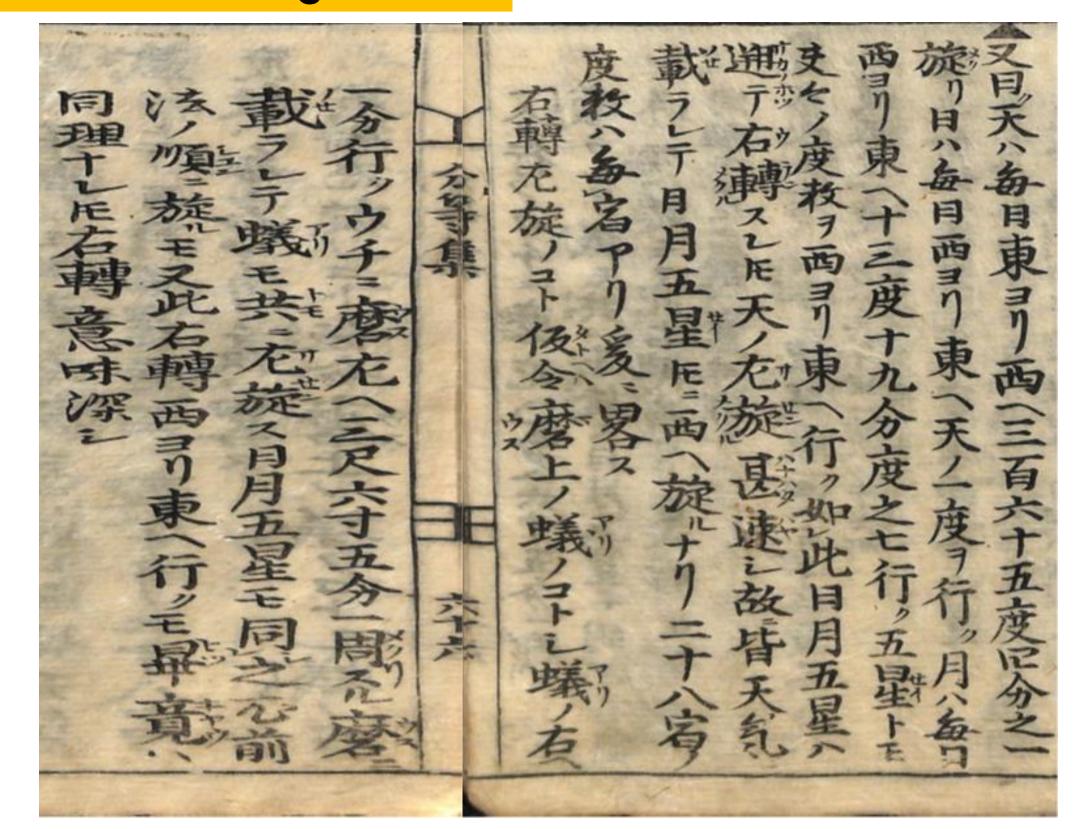
竜ケ崎第一高等学校 白幡探究 I 数学領域 天体と日、月、五星、二十八星の関係

"the whole sky , the san, the moon, planets and 28stars contact"

原文 Original



キーワード

- •右転 turning right
- •左転 turning left
- ·太陽、月、五星、二十八星

sun, moon, planets, and 28stars

英語訳 English translation

The whole sky comes from east to west five degrees three hundred sixty and quarter angle from east to west everyday, and the sun goes the whole sky of an angle from west to east every day, too.

The moon goes 13 and 7/19 degrees from west to east planets goes each degree. In the same way, the sun, the moon, and planets go up and rotation right, but it's very fast that heavenly bodies turns left.

So all are put by the heavely bodies and turn to west with the sun.

The moon and planets. The angle of 28 stars skip each here.

Turning right is turning left, for example, it is just like the number on the millstone. While the ant goes 3 millimeter to right, the millstone goes around about one hundred ten to left. The ant is turning left together with the millstone. It is the same that the sun, the moon and the planets. Also these go turning right from west to east is common principie after all. But it is mysterious to turn right.

Modern translation

度星のが月から 数と皆が五から 数と皆五から。

数学的内容 Math content 天球は 東から西へ 一日一周 〔一周は365度と4/1〕 ^{∓3}South The whole sky go around heavens •日は一日に1度 one round a day to west from •月は一日に13と19/7度 the east. 五星・二十八星はそれぞれの度数 One lap is 365 degrees and 4/1 7 ⊟ The sun Planets and 28 stars 西から東へ動く The sun is 1 degree a day East The moon goes 13 and 7/19 degrees Planets and 28 stars go on the respective frequencies. 大球は It moves to the east from the west. 日・月・五星・二十八星より 左に回るのが速い The moon 五星-二十八星 Planets and 28 stars 天球にのせられて 東から西へ 1L North It is quick in the whole sky to go round to the left from the sun and a month and a 28 South They are put on the whole sky and move to the west from the east. 例えば For example 臼の動いている向き The direction of movement of the mortar. 蟻は臼とは反対の方向に進んでいるが、臼の回転の速さの ほうが速いため、臼の動いてる方向に蟻も動いているように 見える。 Although the ant is progressing in the direction 蟻の動いている向き opposite to a mortar, since the speed of rotation The direction of movement of the ant. of a mortar is quicker, it seems to it that the ant is also moving in the direction which the mortar is moving.

まとめ・今後の課題・感想 Summary, Future tasks, Impressions

まとめ Summary

天球にのせられた日、月、五星、二十八星はそれぞれ西から東へ 動くが、天球が東から西に動く方が速いので地上から見ると日、月、 五星、二十八星が東から西に動いている様に見える。

The sun, the moon, planets and 28 stars that was put in the whole sky goes west from east, but the whole sky that goes east from west is faster than that, so looking at that from the ground it looks like going east from west.

今後の課題 Future tasks

現代語訳や、問題の理解に時間がかかり、英訳も曖昧になった。今 後は英語力や読解力を高め、少しでも日本の学問を世界に分かりや すく説明するため、努力していきたい。

We had taken a long time to change the original into modern language and understanding the problem.

So English translation also have been uncertain.

We would like to make an effort to improve the ability of English and reading comprehension and to explain more clearly knowledge of Japanese all over the world.

感想 Impressions

最初は読んでも何を書いてあるか分からなかったけど、先生方に ヒントをもらったり、自分たちで調べて、理解することができた。今回 の和算はてっきり数学の問題を解くものだと思ったが、出題者の発 見に基づく日記のようなものと分かり、拍子抜けした。また、昔と今 では単位や発想の違いがあり、理解に時間がかかった。しかし、理 科で習った天動説の考え方を用いて、問題の意味を導き出すこと ができた。

今後は、答えのある問題にも、挑戦してみたい。

thought that today's math of Japanese would certainly solve the problem, but we was surprised to know that is like diary which was based on person who makes questions's discovery. And besides, we had taken a long time to understand because there were differences that is unit and idea in the past and the present. But, we could lead meaning of this problem to use way of thinking that the Geocentric theory, the Ptolemaic system learned science.

In future, we want to try problem that have answer.

引用

見立算法規矩分等集 Mitate Sanpou Kiku Buntousyu 享保7年 A.D.1730

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