

Section Européenne DNL mathématiques
HISTORY OF MATHEMATICS:
Ancient Egypt dyadic multiplication

1ère
 2013-14

For example, to find the product of 13×11 , in one column they started from 1, doubling in each row until there were enough numbers in that column to add up to the number (in this case 8, 4, and 1 add up to 13); in the corresponding parallel column they started with the second number, and doubled that. They then made an oblique mark against the rows corresponding where the numbers in the first column added up the value of the first number.

13 x 11	
1	11
2	22
4	44
8	88
13	143

Adding only the numbers in the right column where there is a mark (in this case $11 + 44 + 88$) gives the final result.

Division uses the same technique. So to divide 143 by 11, the scribe would build the same table. He would work in the right hand column this time, adding the numbers until he reached 143 and again making marks. Then the answer is the sum of the numbers in the left hand column where the rows have a mark; so $1 + 4 + 8$ gives the answer 13. This is fine where there is an exact division, but when fractions are involved, they resorted to a variation on the technique, which is a mixture of multiplication and division.

- Problem 1. Compute 23×22 using this method.
 Problem 2. Compute $204 \div 17$ using this method.

Remember that you are an Egyptian today: You don't even know what a calculator is, so forget about using one!

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- Problem 3. Compute 23×22 using this method.
 Problem 4. Compute $204 \div 17$ using this method.

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