

# THE GREAT INVENTIONS OF INDIA

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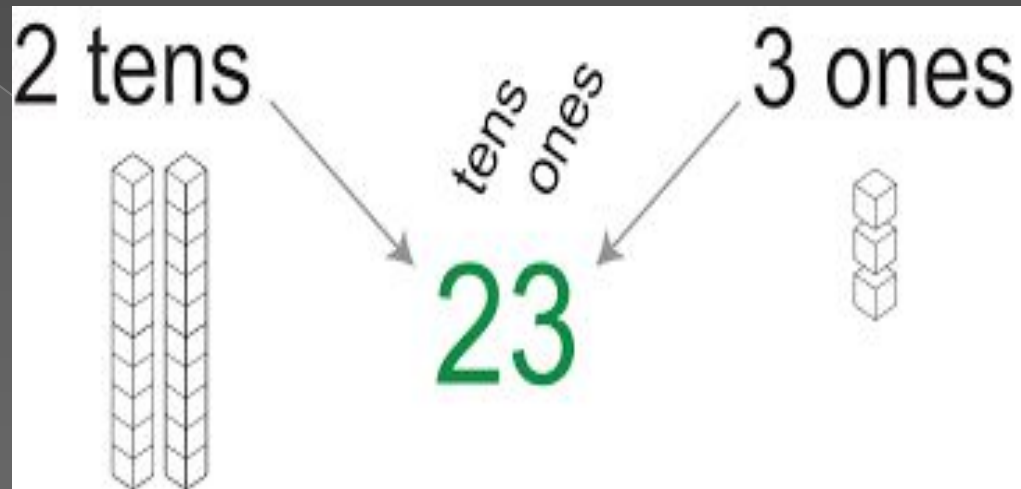
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- *Before going to Aryabhata's invention of zero lets know a little bit about the Indian History of number zero.*
- *Acharya Pingala, a Sanskrit scholar and an Indian Mathematician first used the Sanskrit word 'Sunya', referred to as Zero. The word 'Sunya' means void or empty. It is believed that the first text to use the decimal place value system (includes zero) was first used in Jain text or Cosmology named 'Lokavishkaya'. This is where the term 'Sunya' was used.*

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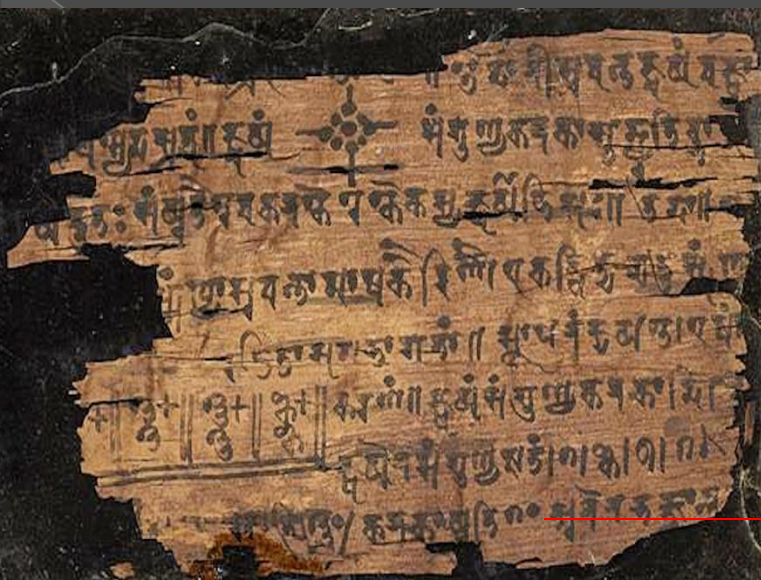


*For Example :-*

*Lets take two identical digits 23. Here the interesting part is in words the number 2 is written as twenty and 3 as 3 . The tens and the units here are being determined by the position of the digits that is digit at the first place represents the units, second place represents the tens. Similarly any digit at the fourth place shall represent hundreds.*

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*This concept of the place value system, although was first used in 'Bakshali Manuscript' held a very important place in Aryabhata's work. But the symbol for Zero was not used by Aryabhata. The use of Zero as a 'digit' was first used in India during the Gupta Period.*

*'Bakshali Manuscript', an Arithmetic manual on merchants records the symbol of zero which is a dot like structure having a hollow structure signifying void or nothing.*

# SHAMPOO

- ❖ The word *shampoo* in English is derived from the word *chāmpo* [flower].
- ❖ *In ancient time* variety of herbs and their extracts were used in making shampoo.





◆ For Example :-

- 1) A very effective early shampoo was made by boiling Sapindus with dried Indian gooseberry (aamla) and a few other herbs.
- 2) Saddle wood is also used in bathing as soap.



- ❖ **Guru Nanak, made references to soapberry tree and soap in 16th century. Washing of hair and body massage was a new indulgence to new traders.**
- ❖ **When they returned to Europe, they introduced their newly learnt habits, including the hair treatment they called shampoo.**





# Mysorean Rocket

One of the first iron-cased and metal-cylinder rockets were deployed by Tipu Sultan's army, ruler of the South Indian Kingdom of Mysore.



He successfully used these iron-cased rockets against the larger forces of the British East India Company during the Anglo-Mysore Wars.

The Mysore Rockets of this period were much more advanced than what the British had.

The use of iron tubes for holding the propellant; this enabled higher thrust and longer range for the missile (up to 2 km range).

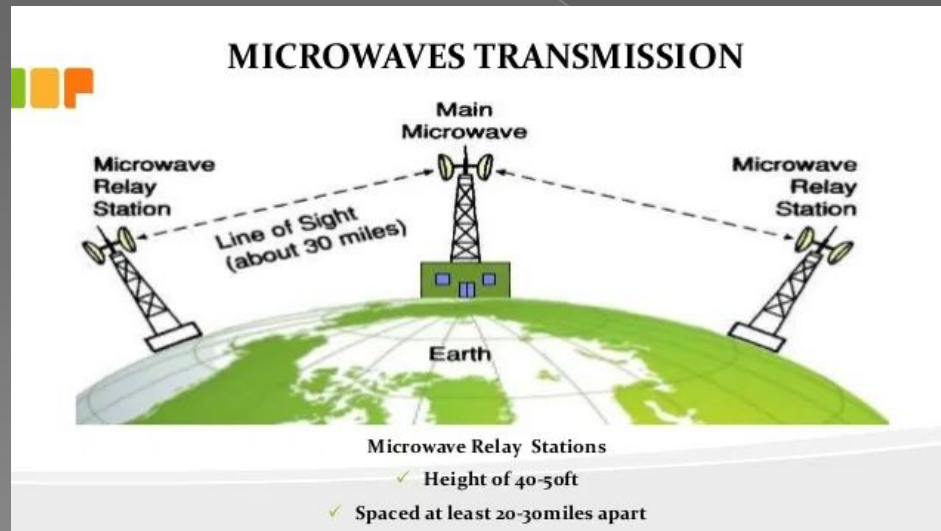


After Tipu's eventual defeat in the Fourth Anglo-Mysore War and the capture of the Mysore iron rockets, they were influential in British rocket development, inspiring the Congreve rocket.



# Microwave Communication

- ◆ Jagadish Chandra Bose pioneered the investigation of radio and microwave communication.
- ◆ IEEE named him one of the fathers of radio science.









# Conclusion

These are some inventions but there are plenty of inventions in indian history, like plastic surgery, chess, woots steel, diamond cutting and polishing, pseudomonas bacteria and many more.

