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# Mod-01 Lec-2 Vedas and Śulba Sūtras - Part 1

Study notes by Sanskrit AI Universe, based on this video

Video by NPTEL course 'Mathematics in India' (IIT Bombay; Profs K. Ramasubramanian, M. D. Srinivas, M. S. Sriram) · nptelhrd · 22 Dec 2013

*Not the creator's own slides*

# About these notes

— Official title: Mod-01 Lec-2 Vedas and Sulbasutras - Part 1

— Speaker and channel: NPTEL course 'Mathematics in India' (IIT Bombay; Profs K. Ramasubramanian, M. D. Srinivas, M. S. Sriram) · nptelhrd

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— Official description: Mathematics in India - From Vedic Period to Modern Times by Prof. M.D.Srinivas,Prof.M.S.Sriram & Prof.K.Ramasubramanian,Department of mathematics,IIT Bombay.For more details on NPTEL visit

— Catalogue caution: Which of the three professors speaks is not stated in the title.

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— Caption source: English (Invidious lang=en track). These English captions look like a prepared track rather than rolling auto-captions, but wording may still be imperfect. Distinctive phrases follow the captions closely.

# From the talk · 0:13–5:09

— And the shulva sūtras form a part of what are known as kalpa sūtras which itself is a part of vanga.

— So and uh the construction so that is involved in creating such platforms etc is the primary content of the text called Sulva Sūtras.

— So that is one of the most interesting uh experiments which can be done with a very simple device called shanku.

— So for doing edya you have to create a certain edgy shala and edgy shala cannot be constructed without knowing the exact directions.

# From the talk · 5:12–10:26

— So this basically lists all the powers of tense starting from 10 ^ of 2 to 10 ^ of 12.

— So shata refers to 10 ^ of two and towards the end of this passage you find parad.

— So we find so we find all the odd numbers listed here listed here and so on the power multiples of four.

— So I'm just quoting this in order to convey a certain message that these people have been quite conversant with the decimal place value system.

# From the talk · 10:29–15:39

- So as I was mentioning earlier the shulva sūtra text form a part of what are known as kalpa sūtras.
- So shouta sūtras, yagas etc. So and gria sūtras so has to do with the rituals which are performed in the household.
- So, dharma sūtras have to do with the general code of conduct which has to be followed for the well-being of society.
- So, that is what is referred on the duties which have to be done by different class of people and so on.

# From the talk · 15:42–20:34

— So and it is more extensive also this bayanasulu sūtra and therefore they feel that it is the most ancient one.

— So one who is versed with menuration and paripaka he should be a sort of inquirer and we also have the adjective parasua.

— See today we have ended up into a certain situation wherein so within civil engineering there will be some 20 disciplines.

— So he will know only to do this he will know only to do this so on so on.

# From the talk · 20:36–25:10

- So different layers have to be arranged in a particular way so that the structural stability is also taken care.
- So which has to be done to see that uh the bricks that you create are solid enough and so on and so forth.
- The topics that we would discuss here is uh roughly so I will start with the determination of cardinal direction.
- So here ox refers to the shanku a small stick which is well shaped and uh there is a tip at the corner.

# From the talk · 25:13–29:44

— So then uh apparently he asked how did that person who came for surveying tell you that your house is not properly not properly oriented.

— So this uh magnetic needle so how precise it is I mean any device can deflect the magnetic so your own card perhaps.

— So this is a very uh simple technique by which we'll be able to see and later when they saw that this is exactly oriented.

— So t basically refers to the time and in the right hand side what you find is phi and delta.

# From the talk · 29:46–34:41

— Now I come to a very interesting construction which has been discussed in bodhai sūtra for constructing a constructing a square.

— So you just in the next figure so W is the nail and you draw a circle.

— So having done this see all that we employ is couple of nails and then rope that is all in trying to draw a square.

— So then he says you tie it and then the same string is used and you have to draw a circle.

# From the talk · 34:44–41:01

— So all that is said here is if you think of drawing a square here and then drawing another square here.

— So which means so if you consider one side as a find a square then vistara find b square samasa samasia means adding them together.

— So that gives you so this is what essentially it is square plus vistara square root is karna.

— So he gives a few triplets as examples of the theorem which he stated in the most general form in the previous sūtra.

# From the talk · 41:03–47:00

— particular form is it fine so katya solutra so it doesn't present it in this particular forum but in a certain context.

— So in finding the value of root you give a you find a certain description which can be written in this particular forum.

— So Bush and Duta and in fact he was one of the pioneers in initiating the study of Indian mathematics the contributions of Indians.

— So if you rewrite this equation see in this particular forum and then you substitute the value 2 4 6 it immediately gives you three more triplets.

# From the talk · 47:07–51:38

— So with this so I will uh conclude my lecture today and we will have the next part of Vedas and Śulba Sūtra in the next lecture.

— They will place it and then so based on the shadow you'll be able to determine the latitude of the place.

— So where you are essentially is given by latitude and longitude and in fact latitude is the most important thing.

— My question is but you know by the same argument then the shadow of the Roman should also fluctuate on a day-to-day basis.

# Sources and credit

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— Watch the video: https://www.youtube.com/watch?v=rZCv7zgIBj4

— Captions used: English (Invidious lang=en track) (en), retrieved on 24 November 2026 via a public Invidious instance. These English captions look like a prepared track rather than rolling auto-captions, but wording may still be imperfect.

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