

Mathematics vs Physics dh nfu; k dsdñ tlnkj

1/2 Hkkjr ds egku xf.krK Jifuokl jkekuqtu dby 33 o'kz gh thfor jgs 1887&1920½ Trinity college Cambridge UK ds egku xf.krK professor G.H. Hardy (1877-1947) muds mentor CUA jkekuqtu us prime numbers hypergeometrical modular function etc ij cgr dke fd, A , d rgydk epkus okyk dke Hkh mlgkaus fd; k ftl s jkekuqtu number ds uke l s tkuk tkrk gA l qks bl dh dgkuhA

Ramanujan's Number

This is popularly known as Ramanujan's number. There is an interesting story about it. The story goes this way : When Ramanujan was sick and admitted at the PATNI hospital London Prof Hardy. his tutor paid him a visit. During conversation Prof. Hardy told Ramanujan that he rode a taxicab to the hospital with a very unlucky number. When Ramanujan asked what the number was, Prof. Hardy replied 1729.

Ramanujan immediately said that it was not an unlucky number at all, but a very interesting number. The smallest positive number that can be represented as the sum of two cubes in two different ways. It is

$$1729 = 10^3 + 9^3 = 12^3 + 1^3$$

1729 is the smallest number to be written as sum of 2 cubes in 2 distinct ways vks l qks vks pksduk ughA Hkkjr ds bl egku Mathematician Ramanujan ds Aj Hollywood ds Director Rojar Spotiswood , d movie cukus tk jgs gsvks ml dk uke gs The first class man. bl movie ea Prof. G.H. Hardy l smudh fe=rk dks n"kkz, k tk, xka ts k fd re tku pps gks Prof. Hardy gh igys 0; fDr Fk ftlgkaus Cambridge ea jkekuqtu dh ifrHkk dks igpkuk Fkk vks njvl y ; s gh muds mentor CUA

(2) egku Aryabhata (476-550 AD)

iVuk ea 476 bl oh ea tles vk; ñkV us gh l cl s igys π dk l cl s accurate value 3.1416..... dk irk yxk; k Fkk fd l h Hkh circle ds circumference and diameter ds ratio dks π dgrs gA blgha ds uke l s 1975 ea India ds First Satellite dk uke vk; ñkV j [kk x; kA Aryabhata is one of the greatest astronomers of India. He was also one of the first to use algebra. His work

Aryabhattiam published in 499 AD summarized the knowledge of mathematics of his time, Aryabhattiam consists of astronomy, 33 rules in arithmetic, algebra and trigonometry.

(3) **egku mathematician – Bhaskaracharya**

Bhaskaracharya was the head of the astronomical observatory at Ujjain, the leading mathematical centre in India at the time. Outstanding mathematicians such as Varahamihira and Brahmagupta had worked there and built up a strong school of mathematical astronomy. In many ways Bhaskaracharya represents the peak of mathematical knowledge in the 12th Century. He reached an understanding of the number systems and solving equations which was not to be achieved in Europe for several centuries.

egku xf.krK HkkLdjpkp; / th dh csh ; kfu Ng o'kz dh Leelavati dh "kknh , d [kkI egqr/ea gksuk FkkA vksx I qksD; k gprkA

Leelavati was the name of Bhaskaracharya's daughter. From casting her horoscope, he discovered that the auspicious time for her wedding would be a particular hour on a certain day. He placed a cup with a small hole at the bottom of the vessel filled with water, arranged so that the cup would sink at the beginning of the propitious hour. ts k fd sand watch ea gksk gA When everything was ready and the cup was placed in the vessel. Leelavati suddenly out of curiosity bent over the vessel and a pearl from her dress fell into the cup and blocked the hole in it. The lucky hour passed without the cup sinking. Bhaskaracharya believed that the way to console his dejected daughter, who now would never get married was to write her a manual of mathematics. This is a charming story.

rc Bhaskaracharya us Leelavati ea maths dh rjQ interest txk; k rkfd og viuk nqk Hkoy tk, vks ml ds uke I s mlgkous maths ds fdrkc dh jpuk dhA ftI s Leelavati ds uke I s Hkh tkuk tkrk gA ftI ea maths ds different aspects dk foj.k gA Differential calculus ds tlenkrk Hkh Bhaskaracharya dksgh ekuk tkrk gA Bhaskaracharya us igyh ckj crk; k fd any term divided by zero is infinity and sum of any term and infinity is infinity.

njvl y Pythagoras theorem dk proof I cl s igys blgkous gh fn; k Fkk ftI dk symbol India ea 37th International Mathematics Olympiad (1996) ea as emblem j [kk X; k FkkA

Leelavati book ds ckjs ea ; g ipfyr gsfid who ever is well-versed with Leelavati can tell the exact number of leaves on a tree.

o's Pythagoras theorem rks rø tkurs gks uk\ t: j i<k gkskA vc l kpdj crkvksfd bl dh theom ds tlenkrk dks g' ftuds uke l s ; g theorem ipfyr gA Greece ds egku xf.krK vksj fopkj d (Philosopher) Pythagoras dk tle 570 BC ea g'k FkkA muds fn, x, fl)kr] Pythagoras theorem dks xf.kr ds {ks= ea ehv dk iRFkj ekuk tkrk gA 495 BC ea mudk fu/ku gks x; kA

1/2 The Feynman lectures on physics – series of lectures

vki dks FkkA/h Feynman ds physics book dh tkudkj h ns n' tks vi us vki ea vuBh gA Nano Science ds initial concept dh crk crk n'rkfd FkkA/h idea yxs, d 0; fDr ds visionary gksus dhA blgkaus vi us students dks physics ds tks lectures fn, ml s rhu volumes ea publish fd; s x; s gA vksj ml dk uke gS& The Feynman's lectures on physics. ijs physics ds gj , d igyw dks bruh ckjhdh l s bruk l jy , oa bruk [kch l s l e>k; k gSfd dksZ Hkh student , d ckj ea gh i<+dj l e> l drk gA o's s bu fdrcka dh , d [kch ; g Hkh gSfd l k/kkj .k fo | kFkhZ Hkh bl dks mrug gh interesting ik, aks vksj mrug gh vPNh rjg l s l e> ik, aks ftruk fd brilliant students ; s lecture mlgkaus 1961&63 ea fy; k FkkA ml tekus ea gh mlgkaus predict dj fn; k Fkk fd vxys dN l kyka ea gh All the printed books in the world can be put on a single library card, tks vc l gh gks x; k gA nf[k, bl egku n' n' khZ 0; fDr dka ; s fdrkc physics ds gj xq dks i<uk pkfg, A XIIth rd ds students dks vHkh t: jr ugha gS; s college student ds fy, gSftl ds ikl l e; gS vksj tks physics ea career cukuk pkgrk gA The Feynman lectures are great but they are at the textbook level and meant for serious reading. bl fy, upto XIIth Std. rd rks i<us ds fy, euk dj jgk gA Feynman was considered as the most original scientist of the last Century and also the most scintillating 1/2pedus okykh/2 teacher of Physics. Feynman shared the Nobel prize for Physics in 1965 with other two scientists for Quantum Electrodynamics. He was born in 1918 and died in 1988 (70 years). ; kfu vHkh dh crk gA , d vksj vk"p; ztud crk oks ; g gS fd fi Nysnl l ky l s ijs fo"o ea tks nanotechnology ij research dk /kæ epk g'k gS ml dk Hkh first concept ijs fo"o dks mlgkaus gh year 1959 ea ; kfu vkt l s 60 l ky igys gh ns fn; k FkkA mlgkaus 1959 ea annual meeting of the American Physical Society ds introductory remarks ea

gh nano-science dk concept ea ns fn; k FkkA ; g conference California Institute of Technology (Caltech) U.S.A. ea gqvk FkkA

bl h dks cksyrs gS visionary bl h dks cksyrs gS cMh ughh cgr cMh pht dk l kpkh cgr cMh pht dh dYiuk djh l p gkdj jgscha Nanotechnology ds l mHkZ ea 1979 ea ; kfu Bhd 20 l ky ckn mlghaus ; s statement fn; k Fkk tks vi us vki ea self explanatory g&

(5) Apple Company ds CEO Late Mr. Steve Jobs dh ij.knk; d dgkuh Hh l qks fopkj gh vtj&vej gS& Steve Jobs , d ij.kk l kr& u; h ihk ds fy,

Steve Jobs yk [kka ykska ds ij.kk l kr jgs gh D; khd basically ; s , d creative bui ku jgs gA mudh cgr l kjh ckrka ea l s ; g Hh , d ckr l qk& vks l qks Steve Jobs dh tle 1955 ea , oa er; q vHkh gky gh ea October 2011 ea gphz gS ; kfu ; s dy 55 l ky th; s vks bl bui ku us vi uh l kp] vi us vision vks vi us presence l s ijh nfu; k gh cny MkyhA mlga twitter ij vc rd dh l cl s vf/kd l onuk, a feyh gA muds ckjs ea ckj&ckj , d ckr dgh tk jgh gS oks ; s fd rhu Apple us l d kj cny Mkyk %

1/4 1/2 igyk Apple ft l s Eve us [kk; k Fkk (Bible i <ls

(2) nlljk Apple tks Newton ds fl j ij fxjk FkkA

1/3 1/2 rhljk Apple ft l s Steve Jobs us cuk; k ; kfu Apple company

Apple company ds rhu Cms-product gS iPod, iPhone , oa iPad market ea mrkj gA tc market ea , d k demand vk; k fd , d , d k i-phone gS tks cgr T; knk simple vks ml ea , d l s T; knk button uk gka , d k challenge l udj rks Steve Jobs ds l kfk dke djus okya dks Hh yxk fd ; s eefdu ugh gS yfdu Jobs us puskh Lohdkj fd; k vks ijh nfu; k dks fn [kk fn; k fd , d k eefdu gS vks os k gh product cuk dj market ea fcNk fn; kA bl fy, dgrk gwfd unrealistic target j [kks fQj gskk perdkjA mlghaus , d k fd; k D; khd mlga nfu; k dks vks advance vks l fo/ktud product nauk FkkA vks D; k\ vki tkurs gS fd tc mlga ub&ubz uk dh yxh Fkh rc os 1974 ea vi us , d nkr ds l kfk Hkjr vk, Fks vks ; gka N% eghus ?ners jgs FkkA muds Stanford University ea fn, x; s lecture dks i <dj vks l udj fo"o ea yk [kka ykska dk thou ds ifr vks career ds ifr utfj; k cnyk gS vks vkus okys fnuka ea gtkj ka dk cnyska

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, d teacher us class ea i nk fd rhu dya dks rhu students ea ck/k rks , d student dks fdruk feysk\ yMeka us mlkj fn; k gj , d student dks , d banana feysk] D; khd 3 divided by 3 is equal to one, fQj teacher us i nk 1000 dyk gS vks 1000 students gS rc\ mlkj vk; k , d

