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by Gonit Sora - Wednesday, May 29, 2013

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> “How grateful we should be to the Hindus who discovered the decimal system that did not occur to the minds of such mighty mathematicians as Archimedes and Apollonius.” —Pierre Simon de Laplace.

?????? ????????? ???????? ??????????? ??? ???????????????? ?????????? ??????? ??????? ??????????? ??????? ?????? ??????-???????? ????? ?????, ???? ??? ?????????????????? ?????? ??????? ??????? ????? ???? ??? ??? ??????? ?????? ?????????? ??????????? ????? ????????, ????? ??? ???????? ??? ??????? ?????? ??? ?? ?????

?????? ???????? ???????? ?????? ??? ??? ?????? ?????????? ????? ??? ?????????? ????? ????? ???? ???? ??? ????? ??????????? ??? ??????? ????? ???-??????, ?-????????? ??? ???????? ???????? ????????? ???????? ????, ?????? ???? ?????????? ???? ??? ??????? ??????? ?????? ????? ??? ???? ??????????? ??????? ??????

??????????? ??? ??????? ??????? ???? ??? ????? ???? ??? ?????? ????? ?????? ??????? ???? ??, ?????? ??????? ?????? ?????-????? ??? ???-???? ???????? ???????? ????? ???????? ??????? ??? ??????? ?????????? ???? ??.? ?????? ??????? ???? ?????? ????? ??????????? ?.?? ?????????? ???? ??? ?.?? ?????????? ??? ???? ????? ????? ??? ??? ??? ???? ????? ????????? ??? ????????? ??? ????-???? ???????? ??? ???? ????? ??? ???? ???? ??? ?????? ?? ??(.) ??? ?????? ?.?? ????? ????? ??? ?? ??? ???? ???? ??? ??? ????? ????? ??? ???? ??????? ?? ???? ????? ?????? ???? ????????? ???? ?????????? ???? ???? ??? ????

?????? ???????? ??????? ?????? ??????? ???????, ????????? ???????? ??????? ??????? ??????— ???? ????? ????? ??, ???, ???? ??????? I, II ??? III?? ?????, ???????? ?????? ????? ?????????? ???? ?????? ???????? ?????????? ????? ??? ?????? ???, ????-???? ??????????? ??????? ?????? ????? ??? ????? ??????? ??????? ?????? ????? ????

?????? ??????? ?????? ????? ???? ?????????? ????? ??? ????? ????? ?????????? ????????? ??????? ?????? ??????(number system) ???? ???????? ??? ????? ????? ????? ??? ?????? ????? ????? ?????? ??????? ??? ?????? ??????? ????? ?????? ???? ????? ?????? ???, ? (?????)??? ????? ?????????? ????? ?????? ??????? ?????? ????????? ????? ?????????? ?????? ???????? ??????? ??? ?? ???, ???, ???, ????? ??? ?????????? ???? ??? ?????? ?? ??????? ?????? ????? ????? ????? ?????????? ?????? ?? ??????? ????????? ????????’?? ???? ??? ???? ???????????,— “????????? ????????????? ?? ??? ???? ??? ?????? ????????? ???? ????????? ?????????? ???? ?? ?????? ????????? ?????? ?????????? ????? ???? ???? ?????? ???? ???????? ???? ??????????? ???? ?????? ????????”

?????????? ?????? ???????? ???????? ???? ???; ???? ????????? ??????? ???? ???? ??? ???????? ?????????? (??????? ??????? ?????? ???????) ???????? ????????? ??????? ???? ???????? ?????? ???? ??????? ????????????? (?????-2)? ?????????? ????? ?? ???????????? ???? ??? ??? ?????????? ????? ???? ?????? ??? ????? ??????? ?????????? ?????? ??? ?????? (.) ?????? ?????? ???? ????? (non-square) ??????? ??????? ??????? ?????? ???? ??? ????? ?????? ??? ???? ??? ?????????? ???? ?? ??????? ???? ?’?— ????? ??? ??????? ??????, ???????? ??????, ??????? ??? ???????? ??????, ??-???? ??? ???-????? ????????? ???, ??????? ????????

??????? ?????? ????? ???? ???? ????? ??????, ????????? ??? ?????????? ???????? ??? ???? ?????????? ???????? ?????????? ??????? ???????, ???????, ?????????? ???????????? (???, ?????, ???? ??? ???), ????????, ??????? ??????, ????? ???????? ????, ??????’???? ???????, —?? ?????? ????? ??? ?????????? ??? ???? ‘????????’ ??? ??????? ‘?????’? ??????? ?????? ??? ????????? ??????, ?? ??? ??????? (combination and permutation) ????????? ??????? ??? ???? ????

??????? ????????? ???????? ??? ????? ????? ??? ????? ?? ???????? ???-?????? ?.??.??. (?????? ?????? ??????) ?????? ??? ??? ?????? ??????? ??????? (???? ??? ????????) ????? ‘???? ??? ??????’ ???? ??????? ?? ???? ??????? ??????? ?????? ??????? ?.??.??.? ‘???????’ ?????? ????????

??????? (negative) ??????? ??????? ?????????? ????????? ?????? ??????? ??? ??????? ??????? ???????? ??? ??? ????? ?????? ???? ?????? ??? ??????? ‘??’ ??? ‘??’ ?????? ?????????? (??? ?????????) ??????? ???????? ????????? ??????? ???

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???????? ?????????? ??? ?? ??????? ?????????? ???? ????— ??????? ????????? ???????? ???? ???????, ???? ??? ????? ???-???, ???-??? ????? ???? ??????? ???? ?????? ???????? ??????? ?????????? ???????? ??? ??? ????????? ???; ??????? ????-???? ???? ???????? ??? ???? ?? ????? ????? ????? ????????? ??????? ????? ????? ?????????? ??? ????? ?? ????? ?????? ???? ?????? ????????? ????????? ????

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????? ????? ????? ????????????, ???? ???? ($$pi$$) ??? ??????????? ?.???? ???? ??????????
??? ??? ????? ??????? ???? ????? (sine) ?????? ??????? ????; ?? ????? ??????? ?????? ???
??????? ???????? ??? ????????? ?????? ????????? ????????, ???????, ???????, ?????, ???????
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?? ?????? ??????? ????????? ?????? ???? ??????????? (??)? ‘????????? ???????’ ????? ?????
???????????? ? ?????? ???? ?????? : ???????? ?? ???????, ???????, ???? ?????????? ???
?????????? ???????? ?????? ????? ??? ????????? ?????? ???????? ??? ???? ??? ?????? ????,
?????? ????? ?????????, ?????? ???? ???? ????? ?????????? ????? ?? ??? ??? ????? ???????
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???????????? ????? ??????? ????? ????? ???? ??? ????????? ??????? ?????? ??????? ???????
?? ?????? ???????? ????? ??????? ????? ???? ?????? ?????? (Gallois), ????? (Euler, Leonhard) ???
????????? (Lagrange, Joseph Louis) ??????? ??????? ?????????? ?? ??????? ???? ????????
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??????????? ???? ??????? ??? ?????? ????? ?? ‘????’? ????? ?????? ??, ??? ????????????
???? ?????????? ???? ??????? ???? ?????????? ?? ????? ???? ???? ?????? ???-?????? ??????
????????? ?? ??????? ??? ?? ?????? ???

??????? ??? ???????? ?? ??? ???? ??????? ???; ??? ??? ???? ?? ?????? ??? ?????? (????? ?? ??????) ????? ???? (Differential Calculus) ???? ????? ??????????? ?????? ????????? ??????? ?????? ????????? ??????? ????? ??????? ???????????? ?? ??????? ????? ??????? ???? ??????????? ????? ???? ??? ??? ???????? ????? ?????? ???????

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??????? ????? ???? ????? ????? ????????????? ????, ???????? ???? ????? ??????? ??????? ???? ???? ????? ??????? ????? ???????? ???????? ??????? ?????? ?????????? ???? ???? ?????? ??? ?????? ???? ?? ???? ??????????? ?’??? ?????? ??? ???? ??? ??? ???, ?????????? ??????? ????????? ???? ?’??? ??????? ????? ?????? ???? ?????? ??????? ???? ?????? ???? ??? ???? ??? ???? ???? ????? ??????????? ???? ????????? ???? ???? ???????? ?????? ?????? ?? ?????

— ?° ???? ?????? ?????????

[?? ????????? ?? ?????, ???? ? ??????? “?????????”? ?????? ?????? ????????? “???? ?’??”? ??????? ????????? ???? ?’??? ?????? ???????? ????? ????????? ?????? ??????]

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