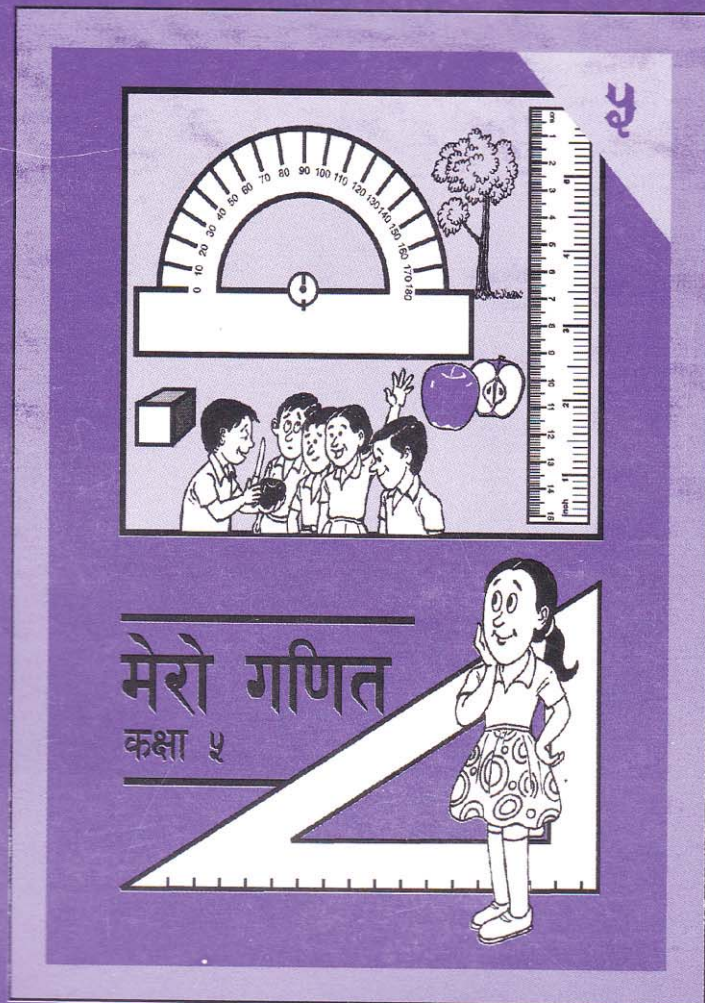


# शिक्षक निर्देशिका

## मेरो गणित



0  
C-s  
c.2

कक्षा - ५

lz lfs lgb lzs sf

d]f]ul0ft

slff %

**kpfzs**

g]kn ;/sf/

lz lff dGqfno

**kf7b]d ljsf; s]b]**

kþfzs ¼ gkfn ;/sf/

lzlf dGqfno

kf7bjld ljsf; s|b|

;fgf7dl, eStk/

© ;jfwsf/ kþfzsdf

o; lgbIzsf;DaGWL ;DkOf{clwsf/ kf7bjld ljsf; s|b|;fgf7dl, eStk/df lglxt 5 . kf7bjld ljsf;  
s|b|Inlvt :jls[tljgf o;sf]k/}jf cflzs efu xax'kþfzg ug{kl/jtG u/} kþfzg ug{sg}jBtlo  
;fwg jf cGo kljlwaf6 /þ8{ug{/ k|tlnlk lgsfNg kf0g]5g .

k|yd ;s/Of ¼ lj= ;#@)^&

dbþ ¼

|                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| o; lgbIzsf;DaGWL kf7sx¿sf sg}klg kþf/sf ;fjx¿ ePdf kf7bjld ljsf; s b  ;Dkfbg tyf kþfzg<br>zfvfdf k7f0lbgXg cg/fjv 5 . kf7sx¿af6 cfpg];fjx¿nf0{of]s b :jfut ub5 . |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## xdf]egf0

ljBfno txsf]lzlffnf0{p2Zodhs, Jofjxf]/s, ;d;fdlos / /fhuf/dhs agfpg ljeGg ;dodf kf70jld, kf70k'ts ljsf; tyf kl/dfhg ug]sfof0{lg/Gt/tf lb0b}cfPsf]5 . ljBfyl/fi6</fli6 Pstf Pjd\ nftflGqs ;sf/sf]efjgf kbf u/f0{g]stf, cgZf;g / :jfjnDagh:tf ;fdflhs Pjd\rfl/lqs u0f tyf cfwf/e' 1fg / hljgf]kof]ul cfjZostf kl'tsf nflu kf70jld, kf70k'ts / cGo k's tyf ;xfos ;fdu| tof/ ug]jlddf slff % df k7gkf7g u/fpg]lzlfsxGsf nflu of]ul0ft ljifosf]lzlfs lgb]zsf tof/ kfl/Psf]xf]. of]lgb]zsf]n]vg lbg]zsd/ >]7, xl/gf/fo0f pkf]wofo, 808kf0fl zdf{ Zofdl;\* wfdl / nftsgfy e66/f0{ ;ldlnt sfofnaf6 ePsf]xf]. pSt sfofnaf6 tof/ ePsf]d:of]n]vgnf0{;DalGwt ljifosf lzlfs sfofnaf6 yk kl/dfhg u/L ljifo ;ldltaf6 clGtd Gk kbf]g ul/Psf]xf]. o;sf]ljsf;df xl/af]h vgn, kf= 8f= l;l4k;fb sf]/fnf, 8f= lzj/fd Gof]kg] j?0fk;fb jB, dSGb/fh zdf{/ lgd]f uf]dsf]dx]k0f{of]ubfg /x]sf]5 . o;sf]ljifo:j:t' ;Dkfbg lbg]zsd/ >]7, 808kf0f zdf{/ Zofdl;\* wfdl tyf efiif;Dkfbg ljiofk;fb clwsf/L / nftskbfz kl08taf6 ePsf]xf]eg]6f0k, n]fp6 l8hf0g / lrqf^sg 6fhg /f0{/ ;Gt]fsdf/ bxfnn]ug]ePsf]xf].

lzlfs lgb]zsf lzlfsxGnf0{sfo]t klzlfof lbg]tyf lzlf0f kljlwdf ;w};lj]o /fvG]k's ;fdu| xf]. o;df kf70jld / kf70k'tsdf lgb]z ul/Psf l;sf0pknIAw÷lj]zi6 p2Z0 tyf ljifo:j:tsf]ljZn]f0f jf lzlf0f;sf0sf jlddf lzlfsn]ckgfpkg]ljlw tyf ljBfyl]sf]l;sf0pknIAw cfsng ug]tl/sf lb0Psf]5 . o;n]k]Gwftds÷j0f]f]ds z]lnf0{eGbf lj]ofsnfkdvL / ljBfyl]sf]l;ljlwnf0{clufnPsf]5 . o;df lgb]z ul/Psf lj]ofsnfknf0{xax'ptfg]Gbf klG o;sf cfwf/df pkoSt lj]ofsnfk÷cEof; agf0{ltgdf ljBfyl]f0{;xeful u/fpg ;s]pglxGn]kbf]uf]ds / kbfjsf/L Gkdf 1fg, ;lk / wf/Off l;Sg]cj;/ kfpG tyf l;s]f s/fnf0{Jo]jxf/df ptfg{;Sg]5g\eg]ck]ff ul/Psf]5 .

lzlfsnf0{lg/Gt/ ;xof]u k]ofcf]l\eg]p2Zon] tof/ kfl/Psf]of]lgb]zsf slffsf ;a}lfdtfsf ljBfyl]sf] l;sf0pknIAwnf0{j]0]Sts Gkd}cfsng u/L kbf]u ug{;s]lzlfs lgb]zsf]kbf]u ;fy\$ / kbfjsf/L xg]5 .

lzlfof cgej / Jofjxf]/s blftfsf cfwf/df lzlfsn]kbf]u ug]ljlw / lj]ofsnfk ce kbfjsf/L xg ;S5g\ . o;nf0{ce Jofjxf]/s agfpg blf lzlfsxGaf6 /rgffds ;ef]jsf];d] ck]ff ul/Psf]5 .

kf70jld ljsf; s]b]

lj= ;#@)^& ;fg]7dl, eStk/

# lgbIz sfsf]kpfu ; DaGwdf

kylds lzlf kf7bjld, -slff \$ / %\_ @)^% cg';f/ kl/dfhg ul/Psf] slff % sf] uloft ljifosf] kf7bk'tssf cfwf/df of]lzlfs lgbIzsf tof/ kfl/Psf]5 . o;df kf7bk'tsdf /xpf ljleGg kf7 lzlf of ug{ jlddf ljleGg kpf/sf wf/off / ;sf/flds Jojxf/ kl/jt6 u/fpg] ljlofsnfksf nflu ;lhnf] xg] u/L kf7utgkdf kf7bef/ 56bf0Psf]5 . ljBfyl6f lzlf ofl;sf0 ljlofsnfkdf ljBfyl{;xelfutf / ;ljlotf a9f] \eGg] p2Jon] lzlf lgbIz sfsf ljleGg kf7df ljljw ljlofsnfk ;dfjz ul/Psf] 5 . lzlf of l;sf0af6 ljBfyl6f uloftlo ljifoj:t'sf] cwoogdf cle?lr, l;hgzlnf / cfd ljZjf; hfUgSf cltl/St uloftlo ;fjfo / kljlofut ;ksf]lj sf; xg ;sf] \eGg] clekfon]o;df ;dfjz ePsf ljlofsnfkxg;nf0{ljBfyl6fV agfpg]kpf; ul/Psf]5 .

uloftlo ;lk ljsf;sf nflu lx;fa u/ pQ/ dfq lgsfNg] (Product oriented) eGb ljBfyl6f uloftlo kljlof l;Sg (Process oriented) vfnsf ljwsf] rog ug{5{. slffsf]fdf ;a}lsl;dsf ljBfyl6f nflu Pp6} ljlofsnfk kof{t / ?lrs/ gxg ;S5 . t;y{lzlfsn]cfjZostfg';f/ lzlf of ljw / ljlofsnfk rog ug{ ;S5g\tfklg o;df lzlf of ;xhls/ofsf nflu sxl ljw tyf ljlofsnfk lgbIz ul/Psf]5 . lzlf lgbIz sfsf kf7xgdf p2Zo, kf7 kl/ro, zHfs ;fduL, lzlf ofl;sf0 ljlofsnfk, dNof<sup>a</sup>sg / yk ;enfj zlif6df lzlfssf nflu pkoftul 7flgPsf ljljw kl pNnV ul/Psf]5 . slfflzlf ofk']{g}o;sf] cwoog u/L pkoftul lgbIzgsf]kpfu u/ kf7of]hg agfpg]u/df o;n]kf7bjldsf p2Zo k/f ug{dxEjk0f{;xofu k%ofpg]5 . o;u/L o;df kf7bk'tssf ljlofsnfknf0{jld}u u/fpg / cEof;sf ljlofsnfksf nflu u/fpgkg[k']{of/L ;DaGwdf lgbIz ul/Psf]5 . To;h]o; ljifosf]cwoog u/fpbf ljzjf gkdf kpfuflds ljw ckgf0{lzl of u/fpbf a9l kpfjsf/L xg]xbf ;fpggk o; ljifosf]lzl of l;sf0 sfo{u/fpg'pkoSt x65 . o;df lb0Psf ljlofsnfk gbgf dfq xg\ lzlf sn]logs}cfwf/df a9leGb a9l ljlofsnfkxg ljBfyl6f]b]gs Jojxf/;u ;DalGwt u/fp/ uloftlo ;lk / bltf ljsf; ug{kglx65 .

o; lzlf lgbIz sfsf kf7sf nflu 56bf0Psf 366L cgbflgt dfq xg\ . lzlf sxg;n]lzl ofl;sf0sf jlddf o;nf0{kl/jt6 ug{;Sgxb]5 . o;u/L ljleGg kf7ut ljifoj:t' lzlf ofsf nflu pNnlvt zHfs ;fduLsf] ;66f :yfglo gkdf pknAw xg ;Sg] pkoSt ;fduLsf]kpfu ug{;lsg]5 . kf7 lzlf ofsf nflu ;<sup>a</sup>s] ul/Psf ljlofsnfknf0{klg 5f6bpg, nDAofpg tyf yk36 ug{;lsg]5 . ljBfyl6f kll/skll/s ?lr÷eLsfj, l;sf0 ;d:of / ;lfdtf xg;Sg]ePsfnlzl ofl;sf0 ljlofsnfkdf tl j0]Sts leGgtfxg;nf0{aeV slffsf ;a}ljBfyl6f]l;sf0pknlAwnf0{j0]Sts gkd}cfsng ug{;s]lzlf lgbIz sfsf]kpfu ;fy6 / kpfjsf/L xg]5 .

lj= ;#@)^&

# ljifo;rl

| <u>ijf :=</u> | <u>ljifoj:t'</u>         | <u>k[7 ;^vof</u> |
|---------------|--------------------------|------------------|
| kf7 !=        | Hofldlt                  | !                |
| kf7 @=        | ;^vofsf]1fg              | !)               |
| kf7 #=        | ul0ftsf cfwf/e't ljjpfxĈ | @!               |
| kf7 \$=       | ;do                      | @%               |
| kf7 %=        | dbf                      | @*               |
| kf7 ^=        | b/l                      | #!               |
| kf7 &=        | kl/ldlt                  | #%               |
| kf7 *=        | lfqkn                    | #*               |
| kf7 (=        | lfdtf                    | \$!              |
| kf7 !=)=      | cfotg                    | \$#              |
| kf7 !!=       | tfr                      | \$%              |
| kf7 !@=       | leGg / bzdnoj            | \$(              |
| kf7 !#=       | kl'tz t                  | ^)               |
| kf7 !\$=      | P]ss lgod / ;fwf/Of Aofh | ^^               |
| kf7 !%=       | lan / ahp                | &)               |
| kf7 !^=       | tYof^szf:q               | &#               |
| kf7 !&=       | ;dX                      | &^               |
| kf7 !*=       | alhul0ft                 | &*               |



kl/ro

o; Psf0df IjBfylxnf0{ kfbfS6/sfj ;xtotfaf6  $0^0$  b]v  $180^0$  ;Ddsf sfjfxz (90, 90 l8ulsf] kll/sdf\_ gfkq / lbOPsf]gfkcg';f/sf sfjfxz lvRg]lj]ofsnsfkd ;lfd agfpg vfhPsf]5 . To; u/L lbOPsf lqeh / rtehsf ehfxz tyf sfjfxz gfkq / ehf tyf sfjfsf]cfwf/df lqehxzs] julS/Of l;sfpg]af/uf 5nkn ul/Psf]5 . lqeh / rtehsf leql sfjfxz sf]ofjkn jldz 2 ;dsfj (180<sup>0</sup>) / 4 ;dsfj (360<sup>0</sup>) xg]s/f kbf]ufds ljlwaf6 kbfloft ug]l;sfpg vfhPsf] 5 .

kf7 1.1 sfjfxzsf]gfk

kf7 3G6L № 7

p2fo

o; kf7sf]cGtodf IjBfylx lgDglnlvt s'fxz ug];lfd xG5g\

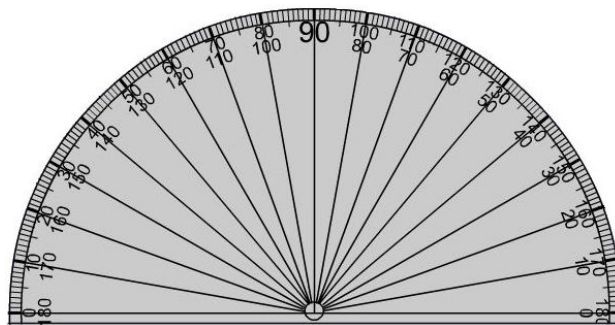
1. kfbfS6/sf]kbf] u/L lbOPsf sfjfxz gfkq .
2. lbOPsf]gfkcg';f/sf sfjfxz kfbfS6/sf]kbf] u/L lvRg .

z]fs ;fdul

:sh, kfbfS6/, Ps Ps hf]l ;Gsfxz -k]os IjBfylnf0{kUg]u/L, sfuhsf]gdg]f .

lzlf0fl;sf0 lj]ofsnsf

1. IjBfylxnf0{ cfk]h] NofPsf] Hofldlt aS;df kfbfS6/  $5 \div 5$  xg] {nufpgxf} / ;ahf0{ kfbfS6/ le]Sg nufpgxf} \. To; kl5 kfbfS6/df s]s]s'fxz lbOPsf]5 /fd/L xg] {nufpgxf} \ / pglxz;üs]5nknaf6 cfjZos s'f sfnf]k6df l6kb}hfgxf} \.



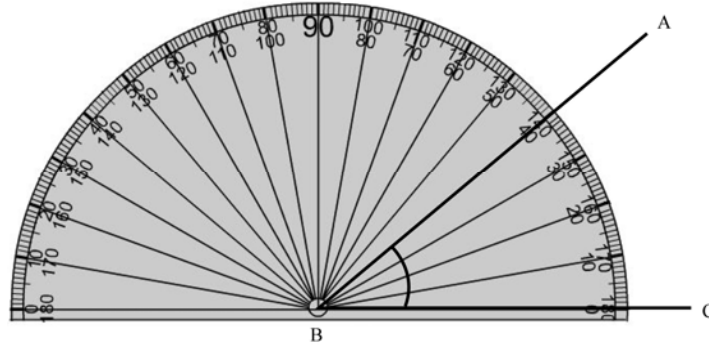
h:t}ll

s\_ o;sf]3]f hDdf 180 a/fa/ efudf af]8Psf]5 .

$v_o; /L$  nlpf :shx dwo] afx/L :sh  $0^\circ$  af6 ;?  $e0\{bfof6 a9b\}uP/ 180^\circ$  ;Dd ku]5 / leq :sh  $0^\circ$  af6 ;?  $e0\{af6 a9b\}uP/ 180^\circ$  ;Dd ku]5 .

2. k]6sf6/sf b0f6 :shx b0f6/af6 sf gfkg k]6 ul/g]s/f k]6 kfl/lbgxf] \. ;fy}:shsf 180 efunf0{l8ul elg5 / ;f]l8ul sf gfkg]Psf0sf 2kdf k]6 xg]s/f :ki6 kfl/lbgxf] \.
3. ;a}ljBfylf0{k]6] u/L Ps Ps hf]l ;Gsfx 2 lj t/Of ug]/ tl ;Gsfx 2 sf] ;xfotf6 sf agfpg nufpgxf] \ ;fy}l ;Gsf] afx/L 3]f 6]k u/L sf lgtf ug{nufpgxf] ;fy}l zlf]sn] klk ;u}sfnf]k6df sf lvRgxf] \. To ;k]5 ljBfyl 2 ;u ePsf k]6sf6/sf ;xfotf6 sf gfkg nufpgxf] \. o ;cl3 ;ah]a]k] u/L k]6sf6/sf ;xfotf6 sf gfkg tl/sf]/ 5nkn ugxf] \.

h:t}]

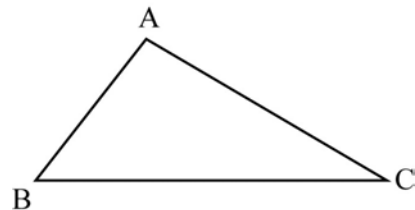


dflysf]lrqdf BC /yf k]6sf6/sf t] ;f] /vdfly vlk6Psf]5 . B laGb' k]6sf6/sf p]ud laGb' dfly k/]5 / /yf AB n] k]6sf6/sf leq :shsf  $40^\circ$  df 5]sf]5 . To ;h]  $\angle ABC = 40^\circ$  eof] . AB /yn] k]6sf6/sf afx/L :shsf  $140^\circ$  df 5]sf]5 . ca  $180^\circ$  af6 pSt  $140^\circ$  36f]bf  $40^\circ$  c]p5 . o ;/L klk sf gfkg ;s5 .

4. lzlf]s cfk]h]nuf sfuhsf]gd]f sf ljBfyl 2 nf0{lj t/Of u/L sf gfkg nufpgxf] \ / ldn] gldn]sf]hfRg nufpgxf] \.
5. ca lzlf]sn] lbPsf]gfkg'f/sf sf k]6sf6/sf ;xfotf6 s ;/L lvRg ;s5 eG] af/] 5nkn ugxf] \ / cfjZos k/]f lzlf]sn] sf lvRg] tl/sf]/ p]fx/Ofaf6 k]6 kfl/lbgxf] \.
6. cGtodf lzlf]sn] kf7ok'tss] cEof ; 1.1 df lb0Psf ;d:ofx 2 ljBfyl 2 nf0{g} ;dfwfg ug{lbgxf] \.

dNofa]sg

1. lbPsf]lqeh ABC sf sf]x 2 A, B / C sf]gk slt slt xnf < cgd]f u/ / cf]g]f cgd]f ldn] gldn]sf] hf' u/ .



2.  $40^\circ, 75^\circ, 105^\circ$  sf sf]x 2 lvr .



yk ;erfj

IjBfyl{nf0{ cfotfsf/ sfuh k6bfP/ gdgf kfbfS6/ agfpg] -kf7bk'tsdf lb0Psf] Ijlofsnfk  
u/fpgxf]\ / To;sf] ;xfotfaf6 sf]f gfkf / lvRg ;ls65 jf ;lsb6 eg] af/df k/Llf0f ug{  
nufpgxf]\.

sg}Pp6f sf]f lbP/ To;nf0{gfk} ToxL gfkcg';f/sf] csf] sf]f lvRg nufpbf b0cf6}Ijlofsnfkdf  
IjBfyl{nf0{blf agfpg ;ls65 / IjBfyl{n]abf]gabf]sf]kQf nufpg ;ls65 .

p27o

o; kf7sf]cG7odf l]BfylxŁ lgDglnlvt s'fxŁ ug{; lfd xg]5g\

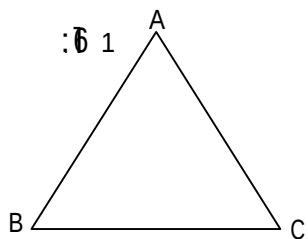
1. ehfsf cfwf/df lqehsf] jul\$ / of ug{.
2. sf]fsf cfwf/df lqehsf kŁ / ofxŁ nŷg .
3. sbj]lb0Psf]lqeh s:tf]kŁf/sf]lqeh xf]kQf nufpg .

z]lfs ; fduł

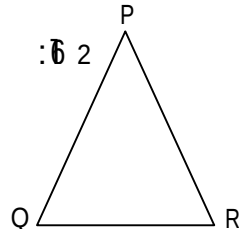
; a}l]Bfylxf0{kŁg]u/L 3-3 cŁf l; Ğsf sf 3 ; Ğ h; df klxfn] ; Ğdf ; a}l; Ğsf sf]gfk a/fa/ , bŷ] ] ; Ğdf 2 cŁf l; Ğsf sf]gfk a/fa/ / t] ] ; Ğdf sbj]klg l; Ğsf sf]gfk a/fa/ gePsf]xf] \ . ehfsf tyf sf]fsf cfwf/df aGg ; Sg] hDdf lqehsf kŁf/xŁcg'f/sf sfuhsf gDg'fxŁ -4,5 cŁf ; dXnf0{kŁg]u/L , ; Ğ :Sj fo/ , kŁb0fS6/ , :sh .

lzlfoł; sf0 l]l0fsnfk

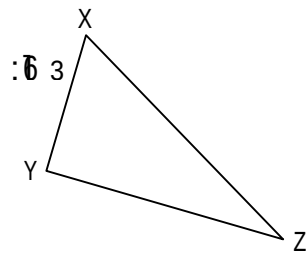
1. ; a}l]Bfylxf0{ 3 cŁf} ; Ğ l; Ğsf l]t / of ug] / To; af6 lqeh lgdf0f u/L aflx/L 3]f 6}k ug{ nufpgxf] \ .



klxfn] ; Ğaf6 agŁsf]lqeh



bŷ] ] ; Ğaf6 agŁsf]lqeh



t] ] ; Ğaf6 agŁsf]lqeh

ca :shsf] ; xfotfaf6 ; a}lqehsf ehfxŁ gfk nufP/ kl/0fd sfnf]kf6ldf nŷg nufpg]]

- klxfn]lqehsf ; a}ehfxŁsf]gfk a/fa/ 5g\.
- bŷ] ]lqehsf b0ĞŁf ehfxŁsf]gfk a/fa/ 5g\.
- t] ]lqehsf sbj]klg ehfxŁsf]gfk a/fa/ 5g\.

tl l; Ğsf xŁaf6 cŁ klg lqeh agfpg ; lsG5 ls egl l]BfylxŁnf0{kŁg ugxf] \ . pglxŁaf6 ; Dej 5g eGg] hjfk cŁPk15 ehfsf cfwf/df lqehsf lgDglnlvt tlg kŁf/ xG5 egl kŁ6 kfgxf] \

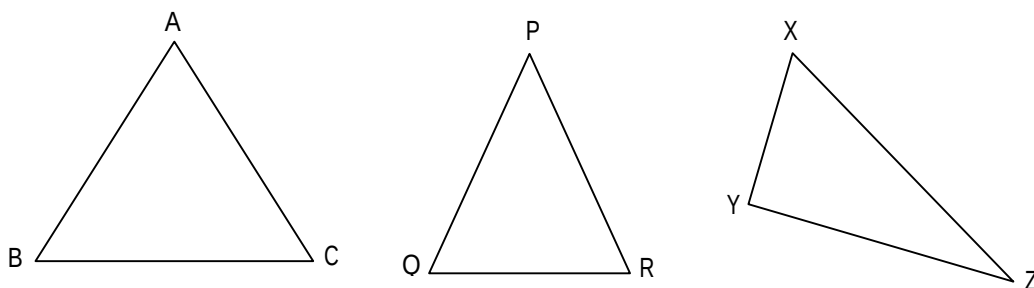
- ; dafx' lqeh 5 hg lqehsf ; a}ehfxŁ a/fa/ xG5g\ To; lqehnf0{ ; dafx' lqeh elG5, h:t]] klxfn] ; Ğ l; Ğsfaf6 agŁsf]  $\triangle ABC$

- **;dlāafx' lqeh** ᄡ hᄡ lqehsf b0cfᄡ ehfxᄡ dfq a/fa/ xᄡ5g\To; lqehnf0{;dlāafx' lqeh elgᄡ5, h:t}ᄡ bᄡ; ᄡ; ᄡ l;ᄡsfaf6 agᄡᄡ  $\triangle PQR$
- **laifdafx' lqeh** ᄡ hᄡ lqehsf sb}klg ehfxᄡ a/fa/ xᄡ5g\To; lqehnf0{laifdafx' lqeh elgᄡ5, h:t}ᄡ t; ᄡ; ᄡ l;ᄡsfaf6 agᄡᄡ  $\triangle XYZ$

2. ljbᄡylᄡᄡnf0{4, 5 cᄡᄡ; dᄡᄡ ljeᄡhg ugᄡᄡ \-ljbᄡyl{; a\ofsᄡ cᄡᄡ/df\_ . cᄡᄡᄡ} nuᄡᄡ sfuhsᄡ gᄡᄡᄡ lᄡᄡᄡ ljbᄡylᄡᄡ; dᄡᄡ ljt/Of ugᄡᄡ \ / tl lqeh ;dafx' ;dlāafx' / laifdafx' lqeh sᄡᄡᄡ < 56bᄡpg nufpgᄡᄡ \.
3. ljbᄡylᄡᄡ; ᄡ cᄡᄡᄡᄡ Hofldlt aᄡ; df eᄡᄡᄡ; ᄡ :Sjfo/ leiᄡᄡ nuf0{To; df sb sᄡᄡ 90° 5 kQf nufpg nufpgᄡᄡ \. ca ;dsᄡᄡ, ᄡᄡᄡᄡᄡ / clwssᄡᄡ 56bᄡpg lᄡᄡᄡᄡᄡᄡᄡ / slᄡᄡᄡ 5nᄡᄡ ugᄡᄡ \-kf7bᄡᄡ: tssᄡᄡ lᄡᄡᄡᄡᄡᄡᄡ cᄡᄡ/df\_
4. ljbᄡylᄡᄡnf0{cᄡᄡᄡ} nuᄡᄡ lqehsf gᄡᄡᄡ; dᄡᄡ ljt/Of u/L tl lqehsf sᄡᄡᄡ ᄡᄡᄡᄡᄡ; dsᄡᄡ cyjᄡ clwssᄡᄡ s:tᄡ 5g\ kQf nufpg nufpgᄡᄡ \ / ljbᄡylᄡᄡsf ᄡᄡᄡᄡ lzlᄡᄡᄡᄡ sᄡᄡᄡᄡᄡᄡᄡ l6ᄡᄡ}ᄡᄡᄡᄡ \.

- klxnᄡᄡ lqeh ABC sf ;a}sᄡᄡᄡᄡ ᄡᄡᄡᄡᄡ -90° eᄡᄡ sd\_ /xᄡ .
- bᄡ; ᄡ lqeh PQR sfᄡᄡᄡᄡ sᄡᄡ; dsᄡᄡ (90°) / aᄡᄡᄡ b0cfᄡ sᄡᄡ ᄡᄡᄡᄡᄡ /xᄡ .
- t; ᄡ lqeh XYZ sfᄡᄡᄡᄡ clwssᄡᄡ -90° eᄡᄡ a9ᄡ\_ / aᄡᄡᄡ b0cfᄡ sᄡᄡᄡᄡ ᄡᄡᄡᄡᄡ /xᄡ .

o; afxᄡ cᄡᄡ sᄡᄡ; Defjᄡᄡ 5 ls <



lgisifᄡᄡ ᄡᄡᄡ sᄡᄡᄡ cᄡᄡ/df lqehsf lgᄡᄡᄡᄡᄡᄡ tlᄡ ᄡᄡᄡ / xᄡᄡᄡᄡᄡᄡᄡᄡ

- **ᄡᄡᄡᄡᄡ lqeh** ᄡ hᄡ lqehsf ;a}sᄡᄡᄡᄡ 90° eᄡᄡ sd xᄡ5g\To:tᄡ lqehnf0{ ᄡᄡᄡᄡᄡ lqeh elgᄡ5, h:t}ᄡ  $\triangle ABC$  ᄡᄡᄡᄡᄡ lqeh xᄡ. o;df  $\angle ABC, \angle ACB / \angle BAC$  ;a}90° eᄡᄡ sd 5g\.
- **;dsᄡᄡ lqeh** ᄡ hᄡ lqehsfᄡᄡᄡᄡ sᄡᄡ; dsᄡᄡ (90°) xᄡ5 To; lqehnf0{;dsᄡᄡ lqeh elgᄡ5, h:t}ᄡ  $\triangle PQR$  ;dsᄡᄡ lqeh xᄡ. o;df  $\angle PQR$  90° 5 .
- **clwssᄡᄡ lqeh** ᄡ hᄡ lqehsfᄡᄡᄡᄡ sᄡᄡ 90° eᄡᄡ a9ᄡ\_ xᄡ5 To:tᄡ lqehnf0{ clwssᄡᄡ lqeh elgᄡ5, h:t}ᄡ  $\triangle XYZ$  clwssᄡᄡ lqeh xᄡ. o;df  $\angle XYZ$  90° eᄡᄡ a9ᄡ 5 .

gff || lqehsf]sb}}Ps sf 180° jf ;fcbf a9L xg ;S5 jf ;Sbg eGgaf/]5nkın ug{f}\.  
s]Pp6}lqehdf b0cfbf ;dsff aGnfg\<

dNofa'sg

1. IjBfylxçnf0{;f :Sjfo/sf];xfotfaf6 Gogsfll, clwssffl / ;dsffl lqeh agfpg nufP/  
dNofa'sg ug{f}\. cGtodf cEof; 1.2 sf ;d:ofxç ;dfwfg ug{IjBfylxçnf0{pTk\}/t  
ug{f}\.
2. cEof;df lb0Psf ;d:ofxç slffdf cEof; u/fP/ klg dNofa'sg ug{;lsG5 . To;u/L IjleGg  
kbf/sf sfuhsf lqehsf gdgfxç tof/ ug{nufpgxf}\.

yk ;btfj

;dafx'lqeh Gogsfll lqeh klg xf] To;f]eP ;dafx'lqeh ;dsffl jf clwssffl xg ;S5 jf ;Sbg <  
Ij rf/ ug{nufpgxf}\. To;u/L ;dlâafx' / Ijifdafx'lqehxç klg Gogsfll ;dsffl jf clwssffl s]  
s]xg ;S5g\5nkın ug{f}\.

p27o

o; kf7sf]cG7odf ljbflyč lgDglnlvt s'fxč ug{; lfd xg]5g\

1. lqeh / rtehsf leql sfhxč gfk .
2. lqehsf leql sfhxčsf]hf 180° xč5 egl kpfloft ug{.
3. rtehsf leql sfhxčsf]hf 360° xč5 egl kpfuaf/f l;4 ug{.

z]fs ;fdu

:sh, k6bS6/, l; ;fsnd, lqeh / rtehsf gdbf -sfuhsf], s'f, lqehsf sfhxčsf] of] b]vpg]sf7sf]gdbf .

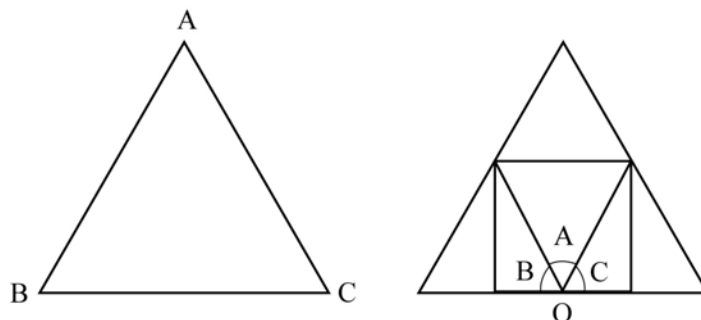
lzlf0f];sf0 lj]ofsnfk

1. k6bS6/sf];xfotfa6 lbOPsf lqeh tyf rtehsf sfhxčsf] sf gfk]lj]ofsnfkxčsf]kg/fjnf]sg ugxf] \. ljbflyčnf0{ljlečg ;dxd lje fhg u/l k]o] ;dxdnf0{ljlečg cfsf/ / kpf/sf sfuhsf gdbf lqehxč lj t/of ugxf] \.
2. k]o] ;dxf ljbflyčnf0{cf-cfçgf] ;dxd lbOPsf lqehxčsf] leql sfhxč gfk nuf0{pglxčsf]hjfknsf cfwf/df lzlfns]lgDglnlvt tlnsf eb]fhgxf] \

| ;dX | sf A | sf B | sf C | $\angle A + \angle B + \angle C$ |
|-----|------|------|------|----------------------------------|
| S   |      |      |      | 180°                             |
| V   |      |      |      | 180°                             |
| U   |      |      |      | 180°                             |
| 3   |      |      |      | 180°                             |

o;df lqehsf leql sfhxčsf]hf 180° xč5 egl lgisif{lgfNgxf] \.

To;u/l lzlfns]cfknh]nuf]sf7sf]gdbf k]t't ug{nuf0{ljbflyčnf0{cfçgf] ;dxd /x]sf sfuhsf]gdbf lqehnf0{k6bpg l;sfpgxf] \.

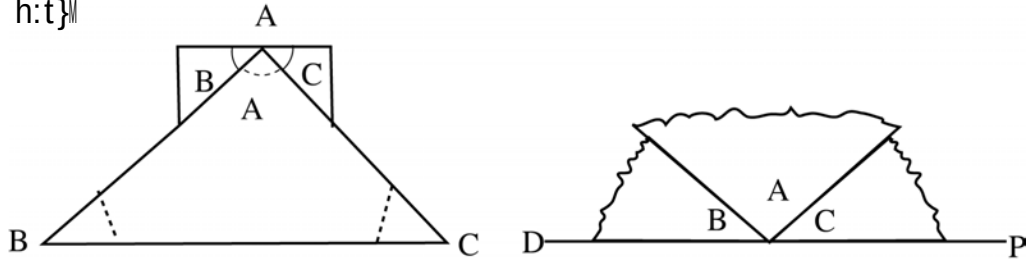


o;/L laGb' O df tlgcf} sf}fxč k/}sn] Toxf" ag}sf] ;/n sf}fsf] hf} 180° xG5 hg lqehsf] tlgcf} sf}fsf] of}ukn x]egl k]6 kfg}f] \.

gf} ||

1. ;a}k}sf/sf lqehnf0{o;/L ;hn}k6bpg g;lsq]xbf To;sf] ;66fdf sf}fxčnf0{sf6] Ps}7fpdf ldnfpg]lj}ofsfnk ce|| pkoSt xg ;S5 .
2. o:tf gdbg} sf7af6 tof/ kf/L kpf]udf Nofpg ;s] ;w}nf0{pkof]ul xg ;S5g\.

h:t}||



lqeh ABC sf]sf} B / C nf0{sf}ln]sf6] sf} A df ldnfpg} laGb' A df hDdf 180° sf] sf} aG5 .

3. lqehsf] leq. sf}fxčsf] of}ukn 180° kpf]loft ug]lj}ofsfnk h:t}lj}ofsfnksf cfwf/df r tef} ABCD sf leq. sf}fxčsf] of}ukn 360° xg]s/f kpf]loft ug] ;lsG5 .

dNof<sup>a</sup>sg

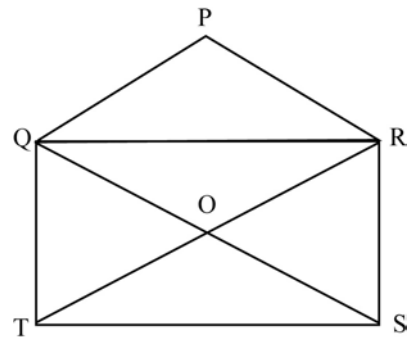
cEof; 1.3 / 1.4 sf ;DkOf{;d:ofxč ;dfwfg ug{nufP/ lj}ofsfnk;ü klg dNof<sup>a</sup>sg ug] ;lsG5 .

yk ;efj

hg ;s} r tef}nf0{klg 2 c}f lqehdf lje}hg ug] ;lsq]xbfn] r tef}sf]leq. sf}fxčsf] of}ukn 360° cyf{ 180° + 180° xg]s/f k]6 kfl/lbg}f] \.

gdbg cEof; xč

1. lrqdf b}fOPsf] vfddf sltc}f sf}fxč 5g\kQf nuf0{ k}of}nf0{gfk} b}fpm ||







hDdf 366L || 35

kf7 2.1 b; s/fB;Ddsf];<sup>a</sup>Vofsf]uGtl / :yfgdfg

kf7 366L || 6

kl/ro

o; kf7cGtu{ lxGb' c/las c<sup>a</sup>s kpf] u/L s/fBecbf dflysf ;<sup>a</sup>Vof uGtl ug{ k9b, c<sup>a</sup>snf0{ clf/df / clf/nf0{ sdf kpf] u/L c<sup>a</sup>sdf n]g] ;lk ljsf; u/fpg v]hPsf] 5 . To;u/L c<sup>a</sup>sxZsf]:yfg dfg atfpg / To;sf cfwf/df ;<sup>a</sup>Vofsf]sh dfg n]g ;Sg]agfpg]lj]ofsnfk pNn]y ul/Psf]5 .

p2]o

o; kf7sf]cGtodf ljBfyl{x lgDglnlvt s'fxZ ug{; lfd xg]5g\||

1. lxGb' c/las c<sup>a</sup>s kpf] u/L s/fBecbf dflysf ;<sup>a</sup>VofxZnf0{uGtl ug{/ sdf kpf] u/L n]g .
2. c<sup>a</sup>sxZsf]:yfgdfg atfpg / :yfgdfgsf cfwf/df To; c<sup>a</sup>ssf]sh dfg atfpg .
3. gkfnl k4ltcg;/f c<sup>a</sup>snf0{clf/df / clf/nf0{c<sup>a</sup>sdf n]g .

z]lfs ;fdu|

:yfgdfg tflnsf, c<sup>a</sup>skQl, sf8afB{s}L, :sh, dfs{ .

lzlf0fl;sf0 lj]ofsnfk

1. lxGb' c/las ;<sup>a</sup>Vof kpf]nldf hDdf 10 c]f]f 566f566}c<sup>a</sup>sxZ dfq xg] / o;df :yfgdfg 10:10 sf k]/sdf a9b} hfg] xgfn] o;nf0{ b;wf/ ;<sup>a</sup>Vof kpf]nl (base ten numeration system) elgG5 eGg]s/f k]6 kfgxf] \. To;u/L x/f c<sup>a</sup>ssf]3 c]f]f dfgxZ xG5g\ . tl xg]-b]yg] dfq, :yfgdf / shdfg . h:t}|| 5437 df 5 sf]b]yg] dfq kfr / xhf/sf]:yfgdf xgfn] o;sf]shdfg kfr xhf/ xG5 eGg]s/f k]6 kfgxf] \.
2. ljBfyl{xnf0{ljleGg ;d]xdf ljefhg u/L :yfgdfg tflnsf lgdf]f ug{ nufpgxf] \. lb0Psf] ;<sup>a</sup>Vofnf0{:yfgdfg tflnsfdf /fvg]tl/sfaf/]5nkin u/fpgxf] \. To;u/L 10 s/fB;Ddsf uGtl ;<sup>a</sup>Vof / ltgnf0{ k9b] tl/sf jf ;<sup>a</sup>Wos gfd pNn]y ul/Psf] rf6{ slffdf k]t't ub] ljBfyl{x;u 5nkin ugxf] \.

| slt c <sup>a</sup> sn]agf]                                | ; <sup>a</sup> Vof | ; <sup>a</sup> Wos gfd |
|-----------------------------------------------------------|--------------------|------------------------|
| Ps c <sup>a</sup> sn]agf]; a]Gbf ;fgf]; <sup>a</sup> Vof  | 1                  | PS (One)               |
| b0{c <sup>a</sup> sn]agf]; a]Gbf ;fgf]; <sup>a</sup> Vof  | 10                 | b; (Ten)               |
| tlg c <sup>a</sup> sn]agf]; a]Gbf ;fgf]; <sup>a</sup> Vof | 100                | ;0 (Hundred)           |

|                                                                          |           |                                 |
|--------------------------------------------------------------------------|-----------|---------------------------------|
| rf/ c <sup>a</sup> sn]ag[sf]; a <sup>e</sup> Gbf; fgf]; <sup>a</sup> Vof | 1000      | xhf/ (Thousand)                 |
| kft c <sup>a</sup> sn]ag[sf]; a <sup>e</sup> Gbf; fgf]; <sup>a</sup> Vof | 10000     | b; xhf/ (Ten Thousand)          |
| 5 c <sup>a</sup> sn]ag[sf]; a <sup>e</sup> Gbf; fgf]; <sup>a</sup> Vof   | 100000    | nfv (Lakh)                      |
| ;ft c <sup>a</sup> sn]ag[sf]; a <sup>e</sup> Gbf; fgf]; <sup>a</sup> Vof | 1000000   | b; nfv (Ten Lakh)               |
| cf7 c <sup>a</sup> sn]ag[sf]; a <sup>e</sup> Gbf; fgf]; <sup>a</sup> Vof | 10000000  | s/f <sup>B</sup> (Crore)        |
| gf]c <sup>a</sup> sn]ag[sf]; a <sup>e</sup> Gbf; fgf]; <sup>a</sup> Vof  | 100000000 | b; s/f <sup>B</sup> (Ten Crore) |

3. To;kl5 :yfgdfg tflnsdf /flvPsf];<sup>a</sup>Vofnf0{clf/df k9b]/ n]g] tl/sfaf/]5nknn ugxf] \.  
h:t}||

| s/f <sup>B</sup>    |                  | nfv    |     | xhf/    |      | Psf0x <sub>2</sub> |    |    |
|---------------------|------------------|--------|-----|---------|------|--------------------|----|----|
| b; s/f <sup>B</sup> | s/f <sup>B</sup> | b; nfv | nfv | b; xhf/ | xhf/ | ;o                 | b; | Ps |
| 2                   | 4                | 1      | 3   | 5       | 6    | 8                  | 9  | 0  |

pSt ;<sup>a</sup>Vofnf0{o;/L k9b / n]g l;sfpg]||  
rfal; s/f<sup>B</sup> t<sub>2</sub>]nfv 5kGg xhf/ cf7 ;o gAa].

;fy}g]kfnl k4ltcg;f/ c<sup>a</sup>snf0{n]bf bfofa6 klxnf]tlgc]f c<sup>a</sup>skl5 / x/f<sup>B</sup> b0{b0{c<sup>a</sup>skl5  
sdf -cw]j/fd\_ sf] kpf] ul/G5 h;n] ;<sup>a</sup>Vofnf0{ k9b / n]g ;lhnf] agfpg] s/f k|6  
kfl/lbgxf] \.

h:t}|| 24,13,56,890  
clf/df lbOPsf];<sup>a</sup>Vofnf0{c<sup>a</sup>sdf n]g] tl/sf af/]5nknn ugxf] \.  
h:t}|| tl; s/f<sup>B</sup> rf/ ;o kGw]hf0{lgDgfg;f/ c<sup>a</sup>sdf n]vG5 ||  
30,00,00,415

| s/f <sup>B</sup>    |                  | nfv    |     | xhf/    |      | Psf0x <sub>2</sub> |    |    |
|---------------------|------------------|--------|-----|---------|------|--------------------|----|----|
| b; s/f <sup>B</sup> | s/f <sup>B</sup> | b; nfv | nfv | b; xhf/ | xhf/ | ;o                 | b; | Ps |
| 3                   | 0                | 0      | 0   | 0       | 0    | 4                  | 1  | 5  |

kf7bk'tssf]cEof; 2.1 sf ;d:ofx<sub>2</sub> ;dfwfg ug{nufpgxf] \ / cfjZos k/f]v08df ;xof]u  
;d] ugxf] \.

dNof<sup>a</sup>sg

1. lj]pfsnfk ;t<sub>2</sub>;t<sub>2</sub>}dNof<sup>a</sup>sg ugxf] \.
2. tnsf cEof; u/fpgxf] \||

- (i) 59,20,70,953 nf0{clf/df n]v .
- (ii) af0; s/f<sup>B</sup> rf/ ;o g]nf0{cNklj/fd kpf] u/L c<sup>a</sup>sdf n]v .

yk ;e]fj

ljBfy]x<sub>2</sub>nf0{clf/df lbOPsf];<sup>a</sup>Vofnf0{c<sup>a</sup>sdf n]g l;sfpbf klxnf :yfgdfg tflnsdf /fVg nufP  
kl5 dfq c<sup>a</sup>sdf n]g nufpgk5{.

kl/ro

o; kf7cGtu{ ldnog;Ddsf ;<sup>a</sup>Vofxnf0{cGt/fi6α k4ltcg;/ c<sup>a</sup>s / clf/df nŷg tyf  
sdf -cwfi/ fd\_ kpfu u/L nŷg / k9b l; sfpgjvfnsf ljjofsnfkx\_ kb5g\.

p2fo

o; kf7sf]cGtodf ljbfylx\_ lgDglnlvt s'fx\_ ug{; lfd xg]5g\||

1. cGt/fi6α k4ltcg;/ c<sup>a</sup>snf0{yfgdfg tflnsdf eg{/ sdf kpfu u/L ;<sup>a</sup>Vofxnf0{nŷg .
2. cGt/fi6α k4ltcg;/ clf/df lb0Psf] ;<sup>a</sup>Vofnf0{c<sup>a</sup>sdf / c<sup>a</sup>sdf lb0Psf] ;<sup>a</sup>Vofnf0{clf/df nŷg .

zHfs ; fdu|

:yfgdfg tflnsf, kl; ; n, sf8afB{kk/, :sh, ;<sup>a</sup>Vof kQlx\_ .

lzlf0fl; sf0 ljjofsnfk

1. ljbfylxnf0{ljleGg ; dXdf ljefhg u/L x/š ; dXdf Ps Ps :yfgdfg tflnsf lgdfuf ug{ nufpgxf] \ . To; kl5 c<sup>a</sup>uhl k4ltcg;/ ;<sup>a</sup>Vofxnf0{ :yfgdfg tflnsdf /fv] cEof; u/fpgxf] \ .
2. cGt/fi6α k4ltcg;/ sdf kpfu ubf{bfotaf6 jldz|| 3,3 c<sup>a</sup>skl5 sdfsf] kpfu ul/gaf/] slffdf 5nkn u/fpgxf] \ / gkfnl k4lteGbf of]slt k/s 5 < eGg]af/uf 5nkn ugxf] \ .
3. 345274124 nf0{sdf kpfu u/L lgDgfg;/ nŷg l; sfpgxf] \ ||  
345,274,124 / o; nf0{lgDgfg;/ :yfgdfg tflnsdf eg{nufpgxf] \ .

| Million  |      |      | Thousand |      |      | Unit     |      |      |
|----------|------|------|----------|------|------|----------|------|------|
| Hundreds | Tens | Ones | Hundreds | Tens | Ones | Hundreds | Tens | Ones |
| 3        | 4    | 5    | 2        | 7    | 4    | 1        | 2    | 4    |

o; nf0{k9bf Three hundred forty five million two hundred seventy four thousand and one hundred twenty four elgG5 egl l; sfpgxf] \ .

4. ljbfylx\_ ; ū 5nkn ubfTwo hundred fifty seven million four hundred twenty thousand and seventy four nf0{c<sup>a</sup>sdf nŷgaf/] cEof; u/fpgxf] \ / cfjZos k/] lgDgfg;/ nŷg l; sfpgxf] \ || 257,420,074
5. cEof; 2.2 df lb0Psf k]oš ; d:ofs] ; dfwfg ug{nufpgxf] \ .

dNof<sup>a</sup>sg

1. ljjofsnfk ; ū ; ū dNof<sup>a</sup>sg ugxf] \ .
2. cEof; 2.2 sf / o; ; ū ; DalGwt ; d:ofx\_ slffdf g; ; dfwfg ug{nufP/ dNof<sup>a</sup>sg ugxf] \ .

kl/ro

o; kf7df ljBfyl{2nf0{29 / ;0St ;^Vofx2 56bfpgsf ;fy}1 b1v 100 ;Ddsf 29 / ;0St ;^Vofx2 kQf nufpg ;Sg]agfpg]vfnsf lj]ofsnfk ;dfj} ul/Psf]5 .

p27o

o; kf7sf]c6Todf ljBfyl{2 lgDglnlvt s7fx2 ug{; lfd xg]5g\

1. 29 ;^Vof / ;0St ;^Vofsf]kl/efiff atfpg .
2. 1 b1v 100 ;Ddsf 29 / ;0St ;^Vofx2 56bfp .

z]fs ;fdul

sf86B{k/, s7L, k6;n, :sh .

lzlf0fl;sf0 lj]ofsnfk

1. ljBfyl{2; 5nkln ub7;^Vofsf]u0fgv08 lgsfNg]tl/sf l;sf0lbgxf] \ h:t}
  - ❖ 1 nf0{1 n]dfq lgz]f efu hf65 To;h]o;sf]u0fgv08 Pp6f dfq x65 .
  - ❖ 2 nf0{1 / 2 n]dfq lgz]f efu hf65 To;h]o;sf]u0fgv08 b0cfbf dfq x65 .
  - ❖ 3 nf0{1 / 3 n]dfq lgz]f efu hf65 To;h]o;sf]u0fgv08 b0cfbf cfbf dfq x65 .
  - ❖ 4 nf0{1, 2 / 4 n]dfq lgz]f efu hf65 To;h]o;sf]u0fgv08 tlgcfbf dfq x65 .
  - ❖ 8 nf0{1, 2, 4 / 8 n]dfq lgz]f efu hf65 To;h]o;sf]u0fgv08 rf/cfbf dfq x65 .

11 nf0{1 / 11 n]dfq lgz]f efu hf65 To;h]o;sf]u0fgv08 b0cfbf dfq x65 . To;kl5 2 cfbf dfq u0fgv08x2 -1 / Toxl ;^Vof dfq\_ePsf ;^Vofnf0{29 ;^Vof (prime number) / 2 cfbfefbf a9l u0fgv08x2 -1 / Toxl ;^Vof afx2 c2 klg\_ePsf ;^Vofnf0{0St ;^Vof elg65 egl k]6 kfgxf] \ . 1 g t 29 ;^Vof xf]g t ;0St ;^Vof xf]egl k]6 kfl/lbgxf] \ .
2. hf] ;^Vofx2 29 xg ;S5g\ls ;Sbg\egl k7g ugxf] \ . Pp6f dfq hf] ;^Vof 2 /x2sf]s7f 5nklnkl5 atf0lbgxf] \ .
3. kf7ok'tsdf lb0Psf]tflnsf cg;f/ 29 / ;0St ;^Vof 56bfp nufpgxf] \ .
4. cEof; 2.3 sf] 1 -s\_ cg;f/ 100 cfbf sf]f ePsf] juf]1st sfuh ;fdlxs tof/ ug{ nufpgxf] \ / To; } cEof;cg;f/ 29 / ;0St ;^Vof -100 ;Ddsf] kQf nufpg] cEof; u/fpgxf] \ .

d\of<sup>a</sup>sg

1.     չ9 / ;øSt ;<sup>a</sup>Vofsf]kl/efiff atfp .
2.     ;<sup>a</sup>Vofxչ 23, 39, 43, 49 sb sb չ9 / ;øSt ;<sup>a</sup>Vofxչ xg\<
3.     1 b]v 20 ;Dd sltcf]f չ9 ;<sup>a</sup>Vofxչ 5g\<

yk ;erfj

1.     1 b]v 42 ;Ddsf չ9 ;<sup>a</sup>Vof / ;øSt ;<sup>a</sup>Vof kQf nufpg lgDgfg';f/ tflnsfaf6 pkoSt xfhf ||

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  |
| 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 | 41 | 42 |

o;/l klxf row df ePs]klxf] 3 cf]f չ9 ;<sup>a</sup>Vofxչ yxf ePkI5 o; tflnsf cg';f/ ;a} չ9 ;<sup>a</sup>Vofxչ klxf]/ k'rf] column df dfq kgI's/f atipgxf]/ tl column df kgI;øSt ;<sup>a</sup>Vof kQf nufPkI5 afSl չ9 ;<sup>a</sup>Vof kQf nufpg] cEof; u/fpg' ce pkoSt xfhf . To;kl5 dflysf]tflnsfno{100 ;Dd a9fP/ չ9 ;<sup>a</sup>Vof vf]hl ug{nufpg ;lsG5 .

## 2.4 ; Rounding of the numbers

366L 5

kl/ro

o; kf7df ; aVof /yfsf] kpf] u/L lb0Psf hg; s} ; aVofxnf0{ klq glhssf] ; o / xhf/df zGofGt ug{ ; lfd agfpg] ljlofsnfk u/f0Psf] 5 . -1000 b]v 99000 ; Dd\_

p2]o

o; kf7sf] cGtodf ljBfykx lgDglnlvt s'fxz ug{ ; lfd xg] 5g\

1. lb0Psf ; aVofxnf0{ ; aVof /yfdf JoSt ug{.
2. lb0Psf ; aVofxnf0{ glhssf] ; o / xhf/df zGofGt ug{.

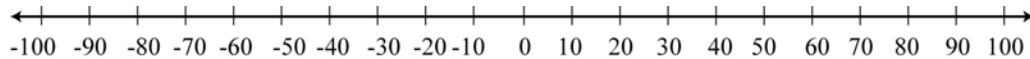
z]lfs ; fdu|

; aVof /yf, sf8afB{ kl; n, :sh .

lzlf0f] ; sf0 ljlofsnfk

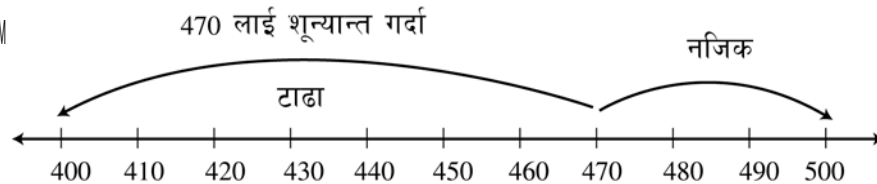
1. ; jk]d ljBfykxnf0{ ; aVof /yfaf/] hfgsf/L eP÷gePsf] / ; aVof /yf lgdf] u/L ; aVofxnf0{ 10 c'essf] k]/sdf / 100 c'essf] k]/sdf ; aVof /yf lgdf] ug{ cEof; u/fpgxf] \ h:t\

2.



glhssf] 100 df zGofGt ubf{lb0Psf] ; aVofnf0{ ; aVof /yfdf /fvL To] ; aVof sg 100 sf] glhs kb5 To ; jk] zGofGt ug{k]s'f pbfx/0faf6 kl6 kfgxf] \.

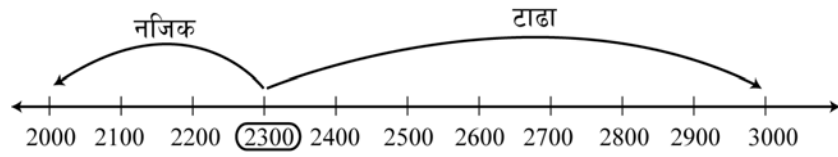
h:t\



470 af6 400 eGb 500 glhs kg]xbf 470 nf0{glhssf] ; odf zGofGt ubf{500 xG5 .

3. glhssf] 100 df zGofGt ubf{h:t}ljlofsnfk glhssf] 1000 df zGofGt ubf{klq b]xf]ofpg ; lsG5 t/ ; aVof /yf lgdf] ubf{100/100 sf]k]/sdf ; aVofxnf0{ /fvL lgdf] ug{kG5 .

ह:त}॥ 2300, 3000 eGb 2000 sf]glhs kb5, To; ॥ 2300 nf0{glhssf]xhf/df zCofCt ubf{ 2000 xG5 .



4. cEof; 2.4 sf ;d:ofxG ljBfylxG; 5nkin ubI;dfwfg ug{nufpgxf] \. xhf/df zCofCt ubf{ 100 df glbOPsf ;<sup>a</sup>Vofnf0{ ;<sup>a</sup>Vof /yfdf /vbf cgbfg u/L /vkggIxbf To; ;DaGWL hfgsf/L ljBfylxGnf0{/fdyl lbg'cfjZos xG5 .

dNof<sup>a</sup>sg

1. 6123 / 1234 nf0{glhssf] ;odf zCofCt u/ .
2. 23425 / 58999 nf0{glhssf]xhf/df zCofCt u/ .



kl/ro

o; kf7df ljBfylxnf0{1 b}v 10 ;Ddsf ;<sup>a</sup>Vofxsf] ju{ ;<sup>a</sup>Vof lgsfNg / 1 b}v 5 ;Ddsf ;<sup>a</sup>Vofxsf] 3g ;<sup>a</sup>Vof lgsfNg ; lfd agfpg] p27o / flvPsf] 5 . To; j/L ;<sup>a</sup>Vofxsf] ju{h / 3gdh lgsfNg] sfodf ; lfd agfpg vflhPsf] 5 .

p27o

o; kf7sf] cGtodf ljBfylx lgDglnlvt s'fx ug{ ; lfd xg] 5g\

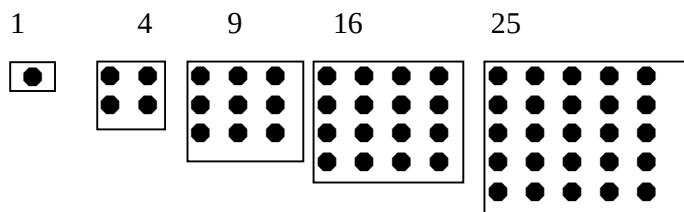
1. 1 b}v 10 ;Ddsf ;<sup>a</sup>Vofxsf] ju{<sup>a</sup>Vof lgsfNg .
2. 1 b}v 5 ;Ddsf ;<sup>a</sup>Vofxsf] 3g ;<sup>a</sup>Vof lgsfNg .
3. lbOPsf] ju{<sup>a</sup>Vofsf] ju{h / 3g ;<sup>a</sup>Vofsf] 3gdh lgsfNg .

z]fs ; fdu

u0fg tflnsf, ju{sf/ sfuhsf 6j]fx, 8f0; , 3gfsf/ rssf] a66f .

lzlf0f] ; sf0 lj]ofsfnk

1. lzlfns] slfddf 3gfsf/ j:t' / ju{sf/ j:t' b}vfpb} loglxnf0{ lsg ju{sf/ / 3gfsf/ j:t' elgPsf] x] egl 5nkin u/fpgxf] \ . ju{sf/ j:t'sf] nDaf0 / rfbf0 a/fa/ ePh:t} ju{<sup>a</sup>Vof klq b0cf] p:tfp:t} ;<sup>a</sup>Vofxsf] u0fgklnaf6 aGg] ;<sup>a</sup>Vof x] egl k]6 kfgxf] \ .
2. u0fg tflnsf k]t't ub]To; tflnsdf p:tf p:t} 2 cf] ;<sup>a</sup>Vofx u0fg ubf{aGg] ;<sup>a</sup>Vofx sltcf] 5g/ sg sg xg\ 5nkin u/fpgxf] \ .
3. ju{<sup>a</sup>Vof a/fa/sf] yf]nf0{lgDgfg ; / 9f'rdf k]6 kf/ k]6 klq ju{ ;<sup>a</sup>Vof / ju{hsf] wf/Off lbg ;lsG5 .



4. cGtodf 1 b}v 100 ;Ddsf ;<sup>a</sup>Vofxsf] ju{<sup>a</sup>Vof ; fxl u0fg tflnsdf vflg nufpgsf ; fy} ljBfylf0{klq To; j/L tflnsf agfpg nufpgxf] \ .
5. ljleGg ju{sf/ sfuhsf b}vfpb} ju{<sup>a</sup>Vofsf] wf/Off k]6 kfl/lbgxf] \ .
6. ju{<sup>a</sup>Vof 2 cf] p:tfp:t} ;<sup>a</sup>Vofxsf] u0fgkln x] egl tl b0cf] Pp6fnf0{s} elgG5 x] egl k]6 ugxf] \ . ljBfylx af6 hjfk gcfPdf lzlfns] g] ju{hsf] wf/Off lbgxf] \ .

oxf'' hDdf yf]nfn] ju{<sup>a</sup>Vof / Psftk[<sup>s</sup>] 5pbf /x]f yf]nfsf] ;<sup>a</sup>Vofn] To; sf] ju{<sup>a</sup>Vofnf0{ hgfp5 .

7. ju{<sup>a</sup>Vof / ju{<sup>a</sup>Vof abfpg] tnsf] knf] f6{klg klg pkoSt xg ;S5 .

|             |       |       |       |       |       |       |         |
|-------------|-------|-------|-------|-------|-------|-------|---------|
| वर्गसङ्ख्या | 1     | 4     | 9     | 16    | 25    | ..... | 100     |
|             | ↑     | ↑     | ↑     | ↑     | ↑     | ↑     | ↑       |
| गुणनखण्ड    | 1 × 1 | 2 × 2 | 3 × 3 | 4 × 4 | 5 × 5 |       | 10 × 10 |
|             | ↑     | ↑     | ↑     | ↑     | ↑     | ↑     | ↑       |
| वर्गमूल     | 1     | 2     | 3     | 4     | 5     |       | 10      |

o; rf6df dflayaf6 tn xbf] ju{<sup>a</sup>Vof / tna6 dflay xbf] ju{<sup>a</sup>Vof cfpg] s/f kl6 kfg[<sup>s</sup>] \.

8. lzlfns] cfknh] nu]sf] 8f0; / 3gfsf/ rssf] a66f slffdf kltt ub] 3gfsf/ j:t' / 3g;<sup>a</sup>Vofsf] alrsf] ;DaGw :ki6 kfg[<sup>s</sup>] \. ju{<sup>a</sup>Vof/ j:t' / ju{<sup>a</sup>Vof l;sfpbf h:t} l]jofnsfk o;df u/fpg ;lsG5 .

9. b0cf] p:tfp:t} ;<sup>a</sup>Vofx<sup>s</sup>] u0fgk[nsf] ;<sup>a</sup>Vof ePh:t} tlgcf] p:tfp:t} ;<sup>a</sup>Vofx<sup>s</sup>] u0fgk[nnf0{3g;<sup>a</sup>Vof elgG5 / tl p:tfp:t} tlg ;<sup>a</sup>VofdWo]Pp6f ;<sup>a</sup>Vofnf0{3gdh elgG5 egl kl6 kfl/lbgxf] \.

10. 1 b]v 5 ;Ddsf ;<sup>a</sup>Vofx<sup>s</sup>] 3g;<sup>a</sup>Vof / 3gdh lgsfng lgDglnlvt Cnf] f6{klg klg pkoSt xg ;S5 .

|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| घनसङ्ख्या | 1         | 8         | 27        | 64        | 125       |
|           | ↑         | ↑         | ↑         | ↑         | ↑         |
| गुणनखण्ड  | 1 × 1 × 1 | 2 × 2 × 2 | 3 × 3 × 3 | 4 × 4 × 4 | 5 × 5 × 5 |
|           | ↑         | ↑         | ↑         | ↑         | ↑         |
| घनमूल     | 1         | 2         | 3         | 4         | 5         |

11. cEof; 2.5 / cEof; 2.6 sf ;d:ofx<sup>s</sup> slffdf gdgfsf] <sup>s</sup>kdf ;dfwfg ug{nfpgxf] \.

d\of<sup>a</sup>sg

1. ;<sup>a</sup>Vofx<sup>s</sup> 2, 3 / 5 sf] ju{<sup>a</sup>Vof / 3g;<sup>a</sup>Vof lgsfn .
2. 81 hg l] Bfylf0{ju{<sup>a</sup>Vof/ <sup>s</sup>kdf slffdf /vbf k]of nf0gdf slt l] Bfylf0{/xG5g\<
3. 3gdh / ju{<sup>a</sup>Vofsf] pbfx/Of; lxt kl/efiff n]y .

yk ;bfj

a] 6g Ans kbf] u/L 3g;<sup>a</sup>Vof / 3gdhsf] cEof; u/fpbf pkoSt xG5 .

## [kf7 2.6] ;<sup>a</sup>Vofx<sub>z</sub>sf] z9 v08ls/0f (Prime Factorization of numbers)

kf7 3G6L || 7

kl/ro

o; kf7cGtu{ tlg c<sup>a</sup>s;Ddn] ag}f ;<sup>a</sup>Vofx<sub>z</sub>nsf] prime factorization af6 u0fgv08 lgsfNg ;lsg]vfnsf lj]ofsnfkx<sub>z</sub> ;dfj} ul/Psf]5 .

p27o

o; kf7sf]cGtodf ljBfy{x<sub>z</sub> lgDglnlvt s/fx<sub>z</sub> ug{; lfd xg]5g\||

1. nuftf/ efu lj lwåf/f 1 b]v 999 ;Ddsf ;<sup>a</sup>Vofx<sub>z</sub>sf] z9 u0fgv08x<sub>z</sub> lgsfNg .
2. u0fgv08sf]j[jflrq agfP/ tlg c<sup>a</sup>s;Ddn]ag}f ;<sup>a</sup>Vofx<sub>z</sub>sf]u0fgv08x<sub>z</sub> lgsfNg .

z]lfs ;fdu|

j[jflrqsf]gd}f .

lzlf0f]sf0 lj]ofsnfk

1. ;j]k]yd lzlfns]z9 ;<sup>a</sup>Vof / z9 u0fgv08x<sub>z</sub>af/]slfddf 5nk|n ug{x}f] \.
2. o;/l Pp6f ;<sup>a</sup>Vofnf0{2 jf 2 eGbf a9L ;<sup>a</sup>Vofx<sub>z</sub>sf] u0fgsf] z kdf JoSt ug] tl/sfnf0{ u0fgv08 lgsfNg' jf v08ls/0f elgG5 . olb tl u0fgv08x<sub>z</sub> ;a}z9 ;<sup>a</sup>Vof dfq cfPdf To;/l JoSt ug]nf0{z9 u0fgv08ls/0f elgG5 .

$$h:t}|| 24 = 12 \times 2 = 6 \times 4 = 8 \times 3 = 24 \times 1$$

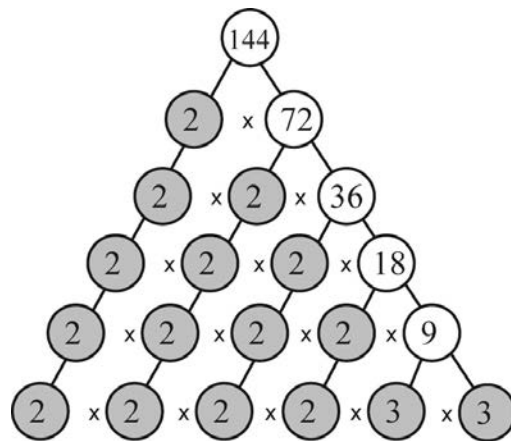
o;/l v08ls/0f ug]nf0{u0fgv08 lgsfNg' elgG5 t/ olb  $24 = 2 \times 2 \times 2 \times 3$  u/l u0fgv08 ul/of]eg]To;df ;a}u0fgv08x<sub>z</sub> z9 ;<sup>a</sup>Vof dfq ePsfns]o;nf0{z9 v08ls/0f elgG5 .

3. 676 nf0{nuftf/ efu lj]pfåf/f tn lb0Pcg';f/ z9 v08ls/0f ug[l; sfpgxf] \||

|    |     |                                                 |
|----|-----|-------------------------------------------------|
| 2  | 276 | $oxf^{''276} hf] ;^aVof ePsfns]2 n]efu u/f}.$   |
| 2  | 338 | $oxf^{''338} hf] ;^aVof ePsfns]2 n]efu u/f}.$   |
| 13 | 169 | $oxf^{''169} nf0\{13 n]dfq lgz}f efu hfg ;S5 .$ |
|    | 13  | $13 z9 ;^aVof xf]To;h]efu ug\{acb u/f}.$        |

$$\therefore 276 = 2 \times 2 \times 13 \times 13$$

4. 144 nf0{u0fgv08sf]j[flrq agfP/ 29 v08ls/0f ug{lg0gfg';f/ l; sfpgxf}\



$$\therefore 144 = 2 \times 2 \times 2 \times 2 \times 3 \times 3$$

dNof<sup>a</sup>sg

cEof; 2.6 sf]g+1 / 2 sf kZgx2nf0{sIffdf xn ug{nufP/ ljBfylh]aen]gae]sf]dNof<sup>a</sup>sg ugxf]\.

# ul0ftsf cfwf/eť ljłpfxč

## (Fundamental Operations in Mathematics)

kf7 3G6L || 6

kl/ro

o; kf7df ljBfylčnf0{ul0ftsf cfwf/eť ljłpfxč ;dfjž ePsf ;d:ofxčsf] ;/n ug{tyf  
sf]7 kpřu xg] / gxg] zflAbs ;d:of nřl ;dfwfg ug{ ;Sg] 1fg tyf ;lksf]lj sf; u/fpg  
vfřhPsf]5 .

p2řo

o; kf7sf]cGtodf ljBfylč lgDglnlvt sřfxč ug{ ;lfd xg]5g\\

1. ul0ftsf cfwf/eť ljłof ;dfjž ;d:ofnf0{ ;/nlsř ug{-sf]7 ;lxt\_
2. sf]7 kpřu ePsf / gePsf zflAbs ;d:ofnf0{ul0ftlo jfSodf nřl ;dfwfg ug{.

zřfs ;fduř

cfwf/eť ljłof, ;řs ;ař kQL ;ařof kQL cflb .

lzlf0fl ;sf0 ljłofsnfk

1. cfwf/eť ljłof jf ;ař klxřfgsf nflu

/fd;ř č 100 lyof]. p;n] č 25 sf]gřskl lsGof]. ca př;ř slt afřl 5 < o:tf křg  
lgdřf u/l lgDglnlvt křg ug{ř\\

s\_ sg ljłof ;dfjž křg xř<

v\_ ul0ftlo jfSodf nřg ;S5ř<

oxř“ul0ftlo jfSo 100 - 25 nf0{ ;ař kQL / ;ařof kQLaf6 břřpgxřř\\.

$$\boxed{100} - \boxed{25}$$

o; sf] ;dfwfg klq břřpg ;SgřG5 .

o; /l g}cGo ljłofsf] ;ař lrgřpb}hřřf zflAbs ;d:ofnf0{ul0ftlo jfSodf nřg] ;lk lj sf;  
xb}hřG5 .

2. ;<sup>a</sup>vof kQl tyf ;<sup>a</sup>s} kQl kpfu u/l ul0ftlo jfSo agfpg] / ;dfwfg lgsfNg] ;lk lj sf;sf nflu ljBfyl{nf0{g} ;xeful agfpg}hfgxfj\ . o:tf ;/nls/0fsf ;d:of sf]7 kpfu xg] jf gxb] b}j}xg ;S5g\; h:t}||

$$s\_ \boxed{2} \times \boxed{6} \div \boxed{3}$$

$$v\_ \boxed{15} + \boxed{9} \div \boxed{3}$$

$$u\_ \boxed{36} - \boxed{16} \div \boxed{4}$$

o;/l ljBfyl{nf0{g} lgsfNg nufpgxfj\ .

3. kf7bk'tssf ;d:of ;dfwfg ug{nufpgxfj\ . pbfx/0fsf nflu kf7bk'tssf]cEof; 3.1 sf]8 g+ lngxfj\ .

$$144 \div 24 - 3 \times 15 \div 5 + 16$$

$$= 6 - 3 \times 3 + 16 \quad [\text{efu lj} \{ \text{of ubf} \}$$

$$= 6 - 9 + 16 \quad [\text{u0fg lj} \{ \text{of ubf} \}$$

$$= 22 - 9 \quad [\text{hf} \{ \text{of ubf} \}$$

$$= 13 \quad [\text{36fp lj} \{ \text{of ubf} \}$$

o;/l ul0ftlo cfwf/e<sup>t</sup> lj}of ;dfj} ;d:ofx<sub>2</sub>sf] ;dfwfg ubf{tnsf]jjddf b}fpgxfj\ .

|        |          |   |   |
|--------|----------|---|---|
| $\div$ | $\times$ | + | - |
| D      | M        | A | S |

4. dflysfljjddf olb u0fg / efu lj}of ;dfj} k}g eP klxnf h] ;<sup>a</sup>s} cfp5 Toxl ubf{x05 egl tYo pbfx/0faf6 kl6 ugxfj\ .

$$15 \times 6 \div 3 \quad \text{jf} \quad 15 \times 6 \div 3$$

$$= 15 \times 2 \text{ -efu ubf} \quad = 90 \div 3 \quad \text{-u0fg ubf}$$

$$= 30 \quad \text{-u0fg ubf} \quad = 30 \quad \text{-efu ubf}$$

To;/l g}hf} / 36fp lj}of ;dfj} k}g eP klxnf h] ;<sup>a</sup>s} cfp5 Toxl lj}of ubf{x05 e0g] tYo pbfx/0faf6 kl6bpgxfj\ .

$$20 - 22 + 6 \quad \text{jf} \quad 20 - 22 + 6$$

$$= 26 - 2 - hf\{ ubf\} = -2 + 6 - 36fpbf\_$$

$$= 4 - 36fpbf\_ = 30 - hf\{ ubf\}$$

5. zflAbs ;d:ofx<sub>2</sub>nf0{ul0ftlo jfSodf tyf ul0ftlo jfSonf0{ zflAbs ;d:ofdf JoSt ugI ;lk  
ljsf;sf nflu tnsf h:tf pbfx/0f / ljpfsnfk u/fpgxf}\.

$$-s\_ 12 / 17 sf]of]uaf6 9 le:Sbf -zflAbs ;d:of\_$$

$$12 + 17 - 9 -ul0ftlo jfSo\_$$

$$-v\_ 5 \times 6 + 3 -ul0ftlo jfSo\_$$

$$5 sf]6 u0ffdf 3 hf\{ -zflAbs ;d:of\_$$

To;/l g}sf]7 ;dfj<sub>2</sub> ePsf zflAbs ;d:ofx<sub>2</sub> ;/nls/0f ugIcEof; u/fpgxf}\ h:t}\ 16 / 9  
sf]cGt/sf]15 u0ffnf0{25 n]efu ubf{slt xG5 <

$$oxf^{\prime} \{(16 - 9) \times 15\} \div 25 n\}gk5\{.$$

$$= \{5 \times 15\} \div 25 klxnf ( ) leq sfd ubf\{$$

$$= 75 \div 25 \{ \} sf]sfd ubf\{$$

$$= 3 efu ubf\{$$

o;/l sf]7 ;dfj<sub>2</sub> ePsf ;/nls/0fsf ;d:ofdf sf]7sf]j]d ( ) / { } sf]kl/ro u/fpgxf}\.

6. kf7bk'tssf ;d:ofx<sub>2</sub> ;dfwfg ug{nufpgxf}\. pbfx/0fsf nflu cEof; 3.2 sf]-s\_ sf]9 g#  
lbgxf}\.

$$22 \div \{20 \div (4 + 6)\} \times 2$$

$$= 22 \div \{20 \div 10\} \times 2$$

$$= 22 \div 2 \times 2$$

$$= 11 \times 2$$

$$= 22$$

$$oxf^{\prime} 22 \div 2 \times 2 df klxnf u0ff ug\{ldNb\} lsg <$$

To;/l g}cEof; 3.2 sf]g#-v\_ sf]4 g#lngxf}\.

16 / 20 sf]of]uknnsf]Ps r]yf0af6 16 / 7 sf]k/s 36pbf slt x65 <

of]zflAbs ;d:of xf]. o;nf0{sf]7 kpf]u u/L ;dfwfg ug{kq]x65 . h;df,

$$\{(16 + 20) \div 4\} - (16 - 7)$$

$$= \{36 \div 4\} - 9$$

$$= 9 - 9$$

$$= 0$$

sf]7 g/vbf s]x65 < 5nkın ug{nufpgxf] \ / lgisifdf kl'gxf] \.

7. kf7bk'tssf af'sl ;d:of ;dfwfg ug{nufpgxf] \.

yk cEof;x6

sf]7 kpf]u gxb]tyf kpf]u xg] ;/nls/0fsf lz lfs lgldf k'gxx6 ;dfwfg ug{nufpgxf] \.

h:t] 6 / 12 sf]of]uknnf0{9 n]efu ubf{slt x65 <

oxf' 6 + 12 ÷ 9 Pp6f unt tl/sf xf]eg] (6 + 12) ÷ 9 ;xl tl/sf xf]. o:tf vfn] k'gxx6  
lz lfs cfk]n]lgldf u/L sf]7 kpf]u ug{kq]jf gkg]f Plsg ug{nufpgxf] \.



kl/ro

o; kf7df ;dosf Psf0x<sub>2</sub> h:t}Ⅱ ;~~3~~18, ldg~~6~~, 3G6f, lbg, dlxgf, jif{ bzs tyf ztfAbL;ü  
kl/lrt u/fpg] ;do;ü ;DaGwt uloftlo ;d:ofsf]u0fg tyf efu ug{tyf ;do tflnsf cⅡoog  
ugItl/sfx<sub>2</sub> ;dfj~~2~~ ul/Psf]5 .

p27o

o; kf7sf]cGtodf ljbFly<sub>2</sub> lgDglnlvt s'fx<sub>2</sub> ug{; lfd xg]5gⅡ

1. ;dosf Psf0x<sub>2</sub> h:t}Ⅱ ;~~3~~18, ldg~~6~~, 3G6f, lbg, dlxgf / jif{ü kl/lrt xg .
2. ;do ;dfj~~2~~ ;d:ofsf]u0fg tyf efu ug{.
3. ;do tflnsf cⅡoog ug{/ ;f~~2~~ DaGWL ;d:ofx<sub>2</sub> ;dfwfg ug{.

z}fs ;fduⅡ

Pgfnu tyf l8lh6n 38lx<sub>2</sub>, Sofn~~1~~8/, ;do pNn~~1~~y ePsf tflnsfx<sub>2</sub> .

lzlf0fl;sf0 ljpofsnfk

1. Pgfnu 38ldf ;~~3~~18 ;0~~6~~]Ps kⅡGsf]dfbf{ldg~~6~~ ;0~~6~~f s]cGt/ cfp5 jf ldg~~6~~ ;0{slt Psf0  
;b~~5~~ < l8lh6n 38ldf 59 ;~~3~~18kl5 60 ;~~3~~18 kⅡbf ldg~~6~~ b]fpg] c<sup>a</sup>sdf s]x~~5~~ < 0Toflb  
kZgsf cfwf/df ;~~3~~18, ldg~~6~~ tyf 3G6fsf]wf/0ff kb/fj[Q u/fpgxf]Ⅱ.
2. To;/L g]cfh laxfg 7 ah~~1~~Ⅱv efⅡn laxfg 7 ahbf 38lsf]3G6f ;0{slt k6s k/f kⅡGsf dfb~~5~~ <  
Sofn~~1~~8/df Ps dlxgdf slt lbg x~~5~~g\< Ps jif~~6~~f slt dlxgf / lbgx<sub>2</sub> x~~5~~g\< 0Toflb  
kZgaf6 lbg, dlxgf / jif~~6~~f]wf/0ff kb/fj[Q u/fpgxf]Ⅱjf ;dosf Psf0 aleⅡg] rf6{agfP/ slff  
sf7fdf eⅡG8bfp~~g~~ nufpgxf]Ⅱ.
3. ;dosf Psf0 ;dfj~~2~~ ePsf u0fg ljpfoSt ;d:ofx<sub>2</sub> kf7bk'tsaf6 ;dfwfg ug{nufpgxf]Ⅱ.  
h:t}Ⅱ cEof; 4.1 sf]kZg g=2 sf] ;dfwfg u/L x]f~~2~~.

;d:of Ⅱ

Pp6f juf~~6~~f/ v]df la?jf ;fg{2 3G6f 15 ldg~~6~~ nfu5 . o:tf 6 cf~~6~~f Kn6df la?jf ;fg{slt  
;do nfuⅡf <

oxf,"

Pp6f juf\$ / Kn6df nfu] ; do lb0Psf]5 / 6 c6f o:t}Kn6df nfu] ; do ;f]wPsf]5 . To ;h] of] ; d:of u0fg ; u ; DalGwt ; d:of xf].

To ; h]

| <u>36f</u> | <u>ldg6</u> |
|------------|-------------|
| 2          | 15          |
|            | × 6         |
| 12         | 90          |
| <u>+1</u>  | <u>- 60</u> |
| 13         | 30          |

∴ nfu] ; do = 13 36f 30 ldg6 x65 .

4. ;dodf Psf0 ;dfjz ePsf efulj|pofSt ;d:ofx2 kf7bk'tsaf6 ;dfwfg ug{nufpgxf}\ .  
pbfx/0fsf nflu kf7bk'tssf]cEof ; 4 sf]7 g=lngxf}\ .

**;d:of ||**

Iz jn] 3 ½ 36df ; a}Ijifosf] uksfo{u/5 . p ; n] k[o3 Ijifonf0{a/fa/ ; do lb65 / 7  
Ijifosf] uksfo{ub5 eg]1 Ijifonf0{uksfo{ug{slt ; do nufp5 <

oxf,"

7 c6f}Ijifonf0{nfu] k/f ; do lb0Psf]5 / Ps Ijifonf0{nfu] ; do ;f]wPsf]5 . To ; h] of] efulj|of ; dfjz ; d:of xf].

|    | <u>36f</u> | <u>ldg6</u> |
|----|------------|-------------|
|    | 0          | 30          |
| 7) | 3          | 30(         |
|    |            | +180        |
|    |            | <u>210</u>  |
|    |            | -21         |
|    |            | <u>0</u>    |
|    |            | <u>0</u>    |
|    |            | ×           |

∴ Iz jn] k[o3 Ijifosf] uksfo{ug{30 ldg6 nufpbf]/x5 .

5. ;do tflnsf ;dfjz ;d:ofx h:t} kf7bk:tssf]k 43 sf]cEof; 4 sf]g=8 ;dfwfg ug{ nufpgxf}\.

kf]/faf6 ljeGg 7fpdf hfg]a;xzsf] ;do tflnsf lbOPsf]5 . kf]/faf6 sf7df8f]hfg]b}A / B a;xz laxfg 5:30 ah]565g\ / lgDglnlvt :yfgdf lgDglnlvt ;dodf kl5g\.

| kf]/i    | A a;     | B a;       |
|----------|----------|------------|
| v]l6f/   | 6:45 am  | 7:00 am    |
| bdfh     | 7:50 am  | 8:45 am    |
| 8d       | 9:30 am  | 10:30 am   |
| cfav]l   | 10:15 am | 12:30 noon |
| dllung   | 11:00 am | 1:00 pm    |
| dxfb]a]l | 11:50 am | 2:30 pm    |
| gf]a;    | 1:00 pm  | 4:00 pm    |
| sf7df8f  | 2:00 pm  | 5:30 pm    |

ca -v\_ sf]kzg k9f}. B a; A a;eGbf slt l9nf]kluf]< kZg bdfh;u ;DalGwt 5 . A a; 9:30 ah]kluf]5 / B a; 10:30 ah]kluf]5 . To;h] 10:30 – 9:30 = 1:00, a; B 1 3G6f l9nf]kluf]5 .

6. l]Bfylxznf0{ cEof;sf nflu kf7bk:tssf afSl ;d:ofx uksfof zkd f ;dfwfg ug{ nufpgxf}\.

dNof<sup>a</sup>sg

;dodf ;dfjz ePsf u0fg / efu l]jof ;dfjz kZgx lzlf cfk]h]lgdf u/L ;dfwfg ug{ nufpgxf}\ h:t}

kf7bk:tssf]k g=43 sf]k g= 3 b]v 6 ;Ddsf ;d:ofx xn ug{nufpgxf}\.

kl/ro

o; kf7df b}zdf k}Int dbf[sf Psf0x, Pp6f Psf0af6 csf[Psf0df }kf6t/ tyf dbf ;dfj} ePsf ;d:ofx}sf];dfwfg / dNo ;}Lsf cfwf/df ah} agfpg]tyf vr{af/df 5nkln ul/g5 .

p2}o

o; kf7sf]cGtodf l}Bfy} } lgDglnlvt s'fx } ug{; lfd xg5g||

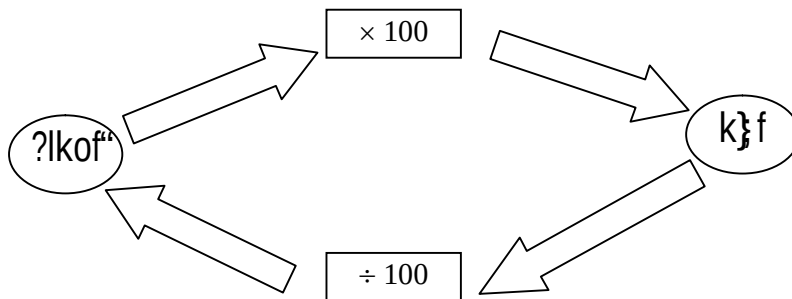
1. sb}wg/flzsf]eStfglsf nflu k}t gr} tyf zlif}sf k||s k||s ;dfof}hg (Contribution) df JoSt ug{.
2. hf}, 36fp, u0fg, efu ;dfj} ePsf dbf; DaGwl zflAbs ;d:ofx } ;dfwfg ug{.
3. dNo ;}Lsf cfwf/df ah} agfpg tyf vr{ug{.

z}fs ;fdu|

g}kfnl dbf[sf l;Ssfx } tyf gr}x, g}kfnl dbf hgfp] s[qd gr} tyf l;Ssfx, ls/fgf k;nsf]dNo ;}L jf s[qd dNo ;}L .

lzlf0f];sf0 l}l}ofsnfk

1. dbf[sf] }kf6t/Of k}f  $\rightarrow$  ?lko<sup>u</sup>  $\rightarrow$  k}fsf]tflnsf agf0{k|t't ug{k}f}.



2. dbf[sf]gdgf lb0{sb}Pp6f /sd eStfgl ug}f nflu xg ;Sg]dbf[sf]k||s k||s combination agfpg]v}h v}hpgxf} \. h;n]a9l combination agfpg ;S5 p;h]lhTg]lgod agfpg ;ls65 .

pbfx/Ofsf nflu } 125 ltg{||

- (i)  $2 \times 50p + 25p$
- (ii)  $2 \times 50p + 2 \times 10p + 5p$
- (iii)  $Re\ 1 + 2 \times 10p + 5p$

o:t}combination agf0{c } yk combination agfpg nufpgxf} \.

3.  $\frac{db[sf]}{kft/Of}; DaGwl ; d:ofx \frac{kf7bk'tsaf6}{dfwfg ug\{nufpgkf\} \backslash}$   
 $pbfx/Ofsf nflu$

(i)  $cEof; 5.1 sf]2 -r\_sf]; d:of ug\{f\} \backslash$ .

?  $5.05 nf0\{k\} fdf \frac{kft/Of}{ug\{f\} \backslash}$ .

oxf; " ?  $5 df 5 \times 100 = 500 k\} f 5$  .

To ;  $h\}$  ?  $5.05 = (500 + 05) k\} f = 505 k\} f$

cyj f directly ubf{  $5.05 \times 100 = 505 k\} f$  .

(ii) To ; /l g} cEof; 5.1 sf] kZg g+3 --f\_l ngkf\.

$2375 k\} f nf0\{?lkoffd \frac{kft/Of}{ug\{f\} \backslash}$ .

oxf"  $(2375 \div 100) ? = ? = 23.75$

j f 100 n] nuftf/ efu ubf{

100) 2375 ( 23.75

```

  200
  375
  300
  750
  700
  500
  500
  ---
    x

```

To ;  $h\}$   $2375 k\} f = ? = 23.75$

4.  $ls/fgf k; nsf] dNo ; 'rL jf kf7bk'tssf] dNo ; 'rL -kh 49\_af\{n\} cfjZos ; fdu\$   
 $lsGgsf nflu rflxg]/sdsf]cfSng ug\{f\} \backslash$ .

dNo ; 'rL

| ljj/Of       | dNo -k\ t Psf0_ |
|--------------|-----------------|
| k\; n        | ?= 1.50         |
| sfl          | ?= 3.50         |
| lstfa        | ?= 18.75        |
| HofldtL afs; | ?= 45.00        |
| emf          | ?= 150.00       |
| snd          | ?= 10.00        |

tflnsf sf cfwf/df kf7bk'tsdf ePsf jf lzlf saf6 :jlgldf kZgsf ;dfwfg ug{nufpgxf}\. h:t}

1 kG;n, 1 sfkl / 1 snd lsGg nflu]dNo cfsng ug{.

$$\begin{array}{r} ?= 1.50 \\ + ?= 3.50 \\ + ?= \underline{10.00} \\ ?= 15.00 \end{array}$$

olb 20 sf]gfb lbP/ eStfgl ul/of]eg]sl t 2 lkntf{kf0Pnf <

$$\begin{array}{r} ?= 20.00 \\ - ?= \underline{15.00} \\ ?= 5.00 \end{array}$$

To;/L g]u0fg ;dfjZ ;d:ofx 2 h:t}5 cfb lsf / 10 cfb sfkl sf]dNo cfsng ubf{

$$\begin{array}{l} \text{lsf} \quad 5 \times ?= 18.75 = ?= 93.75 \\ \text{sfkl} \quad 10 \times ?= 3.50 = ?= \underline{35.00} \\ \text{hddf} \quad ?= 128.75 \end{array}$$

5. kf7bk'tssf ;d:ofx 2 ;dfwfg ug{nufpgxf}\ h:t} kf7bk'tssf cEof; 5.1 sf] g# 8 ;dfwfg ug{nufpgxf}\.

**;d:of**

k]jftfndf 8<sup>af</sup>uf r9bf Ps hgfsf] 2= 15 ltg{kbf]x5 t/ s]fs]lx 2nf0{cfwf dfq zNs nfu0bf /x5 . ljdnsf tlg s]fs]l / pgs l>ldtl ;zlnfn]8<sup>af</sup>uf r9bf hddf slt ltgknf{<

oxf{

$$\begin{array}{rcl} \text{>ldfg/} \text{ >ldtl k]o]ssf] 2= 15 sf b/n] ?= 15 \times 2 & & = ?= 30.00 \\ \text{tlg hgf s]fs]l k]o]ssf] 2= 15 sf cfwf ?= 7.50 sf b/n] ?= 7.50 \times 3} & = ?= \underline{22.50} & \\ \text{hddf vr\} & & = ?= 52.50 \end{array}$$

yk cEof;

1. ls/fgf k;naf6 dNo ;rL Nofpg nuf0{lbPsf j:t sf]dNo cfsng ug{nufpgxf}\.
2. dbf;DaGwl yk Jofjxf]/s ;d:ofx 2 lgdf u/L ;dfwfg ug{nufpgxf}\.

kl/ro

o; kf7df b/L gfk;ld, ld6/ tyf lsldsf af/]kl/ro lbgf;fy}Ps Psf0af6 csf]Psf0df  
 zkfct/ ug]tyf b/L ;dfjz ePsf ;d:ofxzsf;dfwfg ug]tl/sfsf af/]5nknn ul/g]5 .

p27o

o; kf7sf]cctodf ljBfyx lgDglnlvt s'fxz ug{;lfd xg]5g\

1. lbPsf]gfk ePsf /vfv08 lvRg .
2. j:txzsf]gfk cfsng ug{tyf b/Lsf plrt Psf0 kpfu u/L gfk ug{.
3. b/Lsf Psf0xznf0{Psaf6 csf]f zkfct/of ug{.
4. b/Lsf Psf0xzsf]u0fg tyf efu ug{.
5. b/L ;dfjz ePsf ;/n zflabs ;d:ofxz xn ug{.

z]lfs ;fdu

?n/, gfk]lknQf, 6h;{zn/, ld6/ :sh 0Toflb .

lzlf0f;sf0 lj]ofsnfk

1. gfk lbP/ lbPsf]gfkcg';f/sf]/vfv08 lvRg nufpgxf]\.
2. cfCgf]jl/kl/ ePsf j:txz, h:t}l Istfa, k; ;n, Anofs afB{ slffsf]sf]kn]fj6 0Toflb gfk  
 kpfu xg ;Sg]gksf Psf0xz, h:t}cm, m, km s]kpfu ug]cfsng ug{nufpgxf]\ / gfk]  
 jf:tljs gfk lgsfng nufpgxf]\.
3. b/Lsf Psf0xz Ps csf]f zkfct/of ug{nufpgxf]\.

(i) kf7bk:tssf]cEof; 6.1 sf]4-3\_ sf]kzg lngxf]\.

;lddf zkfct/of ugxf]\ 5 lsld 350 ld 75 ;ld

oxf" 5 lsld =  $5 \times 1000 \times 100$  ;ld = 500000 ;ld

350 ld =  $350 \times 100$  ;ld = 35000 ;ld

75 ;ld = 75 ;ld

$$5 \text{ lsid } 350 \text{ ld } 75 ; \text{ld} = 500000 ; \text{ld} + 35000 ; \text{ld} + 75 ; \text{ld}$$

$$= 535075 ; \text{ld}$$

(ii)  $kf70k:tssf]cEof; 6.1 sf]4 -u_ sf]kzg lngxf] \setminus$ .

Id6/df 2kfGt/Of ugxf; \M 3 Id 80 ;Id

$$\alpha_{f, 80}^{\text{d}} = \frac{80}{100} = 0.80 \text{ Id6/}$$

$$T_{0.9} = (3 + 0.80) \lg 6 = 3.80 \lg 6$$

4. b7/sf Psf0xç ;dfjj ePsf u0fg tyf efu;DaGwl ;d:of kf7bk't saf6 ug{nufpgxf}\.

(i) kf7bk'tssf]cEof; 6.1 sf]6 -r\_ sf]kZg lngxf],\.

```
22 | sld 560 ld 30 ;]dnf0{25 n]u0ff ugxf;\.
```

|      |        |      |
|------|--------|------|
| Isld | ld6/   | ;ld  |
| 22   | 560    | 30   |
|      |        | × 25 |
| 550  | 14000  | 750  |
|      |        | -700 |
| 550  | 14007  | 50   |
| +14  | -14000 |      |
| 564  | 7      | 50   |

$$= 564 \text{ lsl } 7 \text{ ldr } 50 ; \text{ldr}$$

(ii) k f70k:tssf]cEof; 6.1 sf]6 -3\_ sf]kzg lngxfj\.

8 lsl d 650 ld 71 ;ld nf0{9 n]efu ugxf;\.



|       |        |     |
|-------|--------|-----|
| lsl d | ld6/   | ;ld |
| 0     | 961    | 19  |
| 8     | 650    | 71  |
| <hr/> |        |     |
| 0     |        |     |
| 8     | = 650  |     |
| →     | + 8000 |     |
| <hr/> |        |     |
|       | 8650   |     |
|       | - 81   |     |
| <hr/> |        |     |
|       | 550    |     |
|       | -54    |     |
| <hr/> |        |     |
|       | 10     |     |
|       | 9      |     |
| <hr/> |        |     |
| 1     |        | 71  |
| →     | +100   |     |
| <hr/> |        |     |
|       |        | 171 |
|       |        | -9  |
|       |        | 81  |
|       |        | -81 |
|       |        | ×   |

$$(8 \text{ lsl d } 650 \text{ ld } 71 ;ld) \div 9 = 961 \text{ ld6/ } 19 ;ld$$

5. b/l ;dfjz ePsf Jofjxfl/s kZgx; kf7bk'tsaf6 ;dfwfg ugxfj\ . pbfx/0fsf nflu kf7bk'tssf]cEof; 6.1 sf]12 sf]kZg lngxfj\.

**;d:of ||**

1 dlxgdf 10 lsl d 650 ld6/sf b/n]3fBf]af6f]vCb 7 dlxgdf k/f eP5 eg]af6f]slt nfd] /x5 <

oxf,"

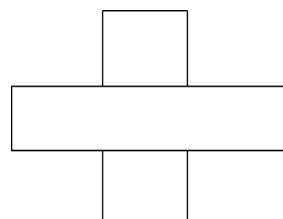
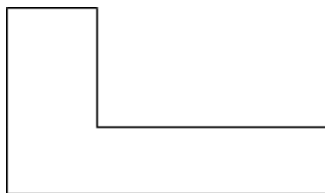
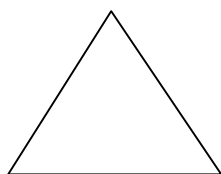
1 dlxgdf agfpg]af6f]nDaf0 / 7 dlxgdf ;Sgkg[ePsf] ;d:of u0fg;ü ;DalGwt xf] . To;h]

|       |       |
|-------|-------|
| lsl d | ld6/  |
| 10    | 650   |
|       | × 7   |
| 70    | 4550  |
| +4    | -4000 |
| <hr/> |       |
| 74    | 550   |

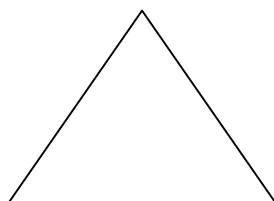
$$\therefore \text{af6f]nDaf0} = 74 \text{ lsl d } 550 \text{ ld6/}$$

यक cEof;

1. b/l sf] gfk; DaGwL ;d:of agf0{ xn ug{ lbgxf] \ h:t} || tnsf cfs[tsf] kl/ldtsf] gfk lgsfNgxf] \.



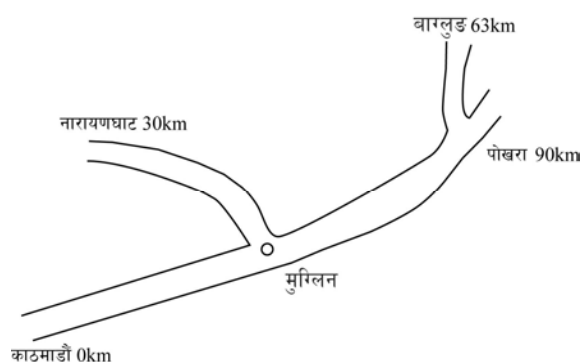
2. Pp6f ;dafx' lqehsf] Pp6f ehf 9.75 cm /x\$ eg] af'sl ehfsf] gfk slt xfhf <



3. ju\$fnDaf0 40cm eP rf8f0 slt xfhf <



4. b/l ;dfj\$ ePsf Jofjxf]/s ;d:ofx\$ lbgxf] \ h:t} || 200 km sf] ofqf kl't 366f 40 km sf b/n] to ubf{ slt 366f nfUnf < OToflb .



5. Road map df b/l lgsfNg nufpgxf] \.

- (i) sf7df8f] v dlUng xb}gf/fo0f3f6sf] b/l
- (ii) dlUngb] v kf]/f xb}afUn<sup>a</sup>; Ddsf] b/l OToflb .

kl/ro

o; kf7df cfotfsf/ / juf\$ / cfs[txčsf]kl/ldlt lgsfNg] ;đxčsf] hfgsf/L lbOPsf]5 . tl  
;đxč kpřu u/] cfotfsf/ / juf\$ / cfs[txčsf]kl/ldlt lgsfNg] Jofjxf/s ;d:of ;dfwfg  
ug{ ;lfd agfpg vfřhPsf]5 .

p2řo

o; kf7sf]cGtodf ljbřylč lgDglnlvt sřfxč ug{ ;lfd xg]5g\\

1. cfotfsf/ / juf\$ / j:tsf]kl/ldlt lgsfNg] ;đ atfpg .
2. ;đ kpřu u/] cfotfsf/ / juf\$ / j:txčsf]kl/ldlt lgsfNg] .
3. cfotfsf/ / juf\$ / cfs[txčsf]kl/ldlt ;DaGWL Jofjxf/s ;d:of ;dfwfg ug{.

zřfs ;řduř

ljleGg cfsf/sf -cfotfsf/ / juf\$ / 38]L÷hUuf÷af/Lnf0{af/n]3]řf]lrq, cfotfsf/ sf7  
jř afSnř]sfuhsf 6jřfxč, juf\$ / sf7 jř afSnř]sfuhsf 6jřfxč, :sř, wfuf]cflb .

lzlf0ř;sf0 ljřofsnfk

1. ljbřylčnf0{ljleGg cfsf/sf -cfotfsf/ / juf\$ / 38]L÷hUuf÷af/Lnf0{kvřf jř af/n]  
3]řf]lrq břřpgxf]\\. lrqdf ePh:t}pglxčsf] 38]L÷hUuf÷af/Lnf0{klg kvřf jř af/n]  
3]řf]5 < o:t}u/L 3]řf af/L÷auř}fxč břřf 5ř< křg ubř5nkin ug{nufpgxf]\\.
2. sbj}j:t' jř ;txsf]3]řnf0{s]elgč5 < křg ugxf]\\. kl/ldltsf]kl/efiff s;/L lbg ;lsPnf  
5nkin ug{nufpgxf]\\.

sbj};tx jř j:tsf]j|/kl/sf]3]řsf]gřknf0{To;sf]kl/ldlt elgč5 .

3. ljbřylčnf0{lstfa, 8ř; cflbsf]kl/ldlt lgsfn] břřpg nufpgxf]\\.
4. lrqdf břřfOPsf] 38]L÷hUuf÷af/Lnf0{3]řf nřlu kvřf jř af/ slt nřdf] rřfxPnf < s;/L  
lgsfN5ř\* 5nkin u/fpgxf]\\.
5. cfotfsf/ sf7 jř afSnř]sfuhsf 6jřfxč břřf/ tl j:txčsf]j|/kl/sf]3]řf slt xřf < s;/L  
lgsfN5ř< 5nkin u/fpgxf]\\.
6. ljbřylčnf0{;dřdf lřefhg ugxf]\\. :sř / wfuf]lbgxf]\\. / cfotfsf/ sf7 jř afSnř]  
sfuhsf 6jřřsf]nDaf0 slt 5 < gřkg nufpgxf]\\. ;xl tl/sfaf6 gřkg ;xřu ugxf]\\. -olb  
ljbřylčn]gřkg uNtL u/řř gřkg l;sfpgxf]\\.

7. Pp6f cfotfsf/ sf7sf]6j]f b]vpgxf] \ . To; sf]kl/ldlt slt xfhf < Ps hgf ljBfylhf0{b]vpg nufpgxf] \ . To; sf7sf]6j]f sf]nDaf0 / rf8f0 sgsb xf] < lrGg nufpgxf] \ . csf]ljBfylhf0{ :shn] rf/cf8f lsgf/f gfk nuf0{gfk af8f l6kgxf] \ .

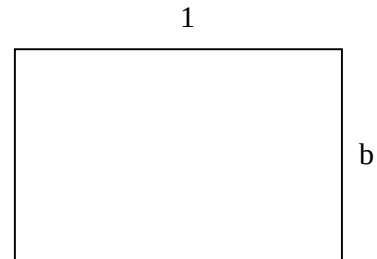
af8f tn pNn] ul/Pcg';f/ kTo8 r/0fdf kZgf0/ ub] ;q l; sfpgxf] \ .

$$\begin{aligned} \text{cfotfsf/ sf7sf]6j]f sf]kl/ldlt} &= nDaf0 + rf8f0 + nDaf0 + rf8f0 \\ &= nDaf0 + nDaf0 + rf8f0 + rf8f0 \\ &= 2 nDaf0 + 2 rf8f0 \\ &= 2 - nDaf0 + rf8f0 \end{aligned}$$

kl/ldlt nf0{P, nDaf0 nf0{1 / rf8f0 nf0{b n]hgpbf

;q

cfotfsf/ j:t sf]kl/ldlt  $P = 2(1 + b)$  x65 eGg]atf0lbgxf] \ .



8. ;dXnf0{nDaf0 10 ;ld / rf8f0 7 ;ld gfk n]vPs]cfotfsf/ sfuhsf]6j]f lbgxf] \ / To; sf]kl/ldlt lgsfNg nufpgxf] \ . ljBfylx6 ;q kpfu u/L xn gu/df ;q kpfu u/] xn u/L b]vfo{ lbgxf] \ .

oxf' ;

cfotfsf/ sfuhsf]6j]f sf]nDaf0 (1) = 10 ;ld

cfotfsf/ sfuhsf]6j]f sf]rf8f0 (b) = 7 ;ld

cfotfsf/ sfuhsf]6j]f sf]kl/ldlt (P) = <

;qcg';f/ ,



$$P = 2(1 + b)$$

$$= 2(10 ;ld + 7 ;ld)$$

$$= 2 \times 17 ;ld$$

$$= 34 ;ld$$

9. ljBfylx6 nf0{kf7bk'tssf]k] g+%^ df lb0Ps]pbfx/0f 1 cWoog u/L ;u8f] ;fyl;u 5nkn ug{nufpgxf] \ .

10.  $l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ k f_7 b k : t s s f \} k h \} g = \% \& \text{ df } l b_0 P s f \} c E o f ; 7 s f \} g = ! - s _ / - v _ s f \} k z g \text{ xn ug } \{ n u f p g x f \} \backslash . p Q / ; \ddot{u} s f \} ; f y l ; \ddot{u} l e 8 f_0 h f R g \text{ nufpgxf} \} \backslash .$
11.  $P s \text{ hgf } l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ k f_7 b k : t s s f \} k h \} g = \% * \text{ df } l b_0 P s f \} c E o f ; 7 s f \} g = 2 - s _ s f \} k z g \text{ af} \{ \text{ nufpgxf} \} \backslash .$
12.  $l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ c f o t f s f / / j u f \xi f / s f u h s f \} 6 j \} f x \ddot{u} l b g x f \} \backslash / j u f \xi f / s f u h \text{ 56 b f p g } \text{ nufpgxf} \} \backslash . j u \{ s \} h f_0 \{ e l g_5 < k z g \text{ ug} \{ \text{ nufpgxf} \} \backslash . P s \text{ hgf } l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ a f \{ \text{ nufpgxf} \} \backslash . k z g f_0 / u b \} \} g_0 g f g ; f / ; \ddot{u} l g s f N g \text{ nufpgxf} \} \backslash \backslash$   
  
 $j u f \xi f \} k l / l d l t = n D a f_0 + n D a f_0 + n D a f_0 + n D a f_0$   
  
 $k l / l d l t n f_0 \{ p / n D a f_0 n f_0 \{ l n \} h g f p b f$   
  
 $; \ddot{u} ,$   
  
 $j u f \xi f \} k l / l d l t P = 4 l x_5 e g l . a t f_0 l b g x f \} \backslash .$
13.  $8 ; \} d n D a f_0 e P s f \} j u f \xi f / s f u h s f \} 6 j \} f b \} y f p g x f \} \backslash / o ; s f \} k l / l d l t s l t x f \} h f < ; \ddot{u} k p f \} u / \} l g s f N g \text{ nufpgxf} \} \backslash . l d n f p g \} l_j B_{f_{l_k}} \{ \chi_{d \backslash \backslash o} \} P s \text{ hgf } n f_0 \{ a f \{ \text{ nufpgxf} \} \backslash .$
14.  $l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ k f_7 b k : t s s f \} k h \} g = \% \& \text{ df } l b_0 P s f \} p b f x / o f 2 ; \ddot{u} s f \} ; f y l ; \ddot{u} 5 n k n u / l c \backslash \backslash o o g \text{ ug} \{ \text{ nufpgxf} \} \backslash .$
15.  $l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ k f_7 b k : t s s f \} k h \} g = \% * \text{ df } l b_0 P s f \} c E o f ; 7 s f \} g = \# - s _ / - v _ s f \} k z g \text{ xn ug } \{ n u f p g x f \} \backslash . p Q / ; \ddot{u} s f \} ; f y l ; \ddot{u} l e 8 f_0 h f R g \text{ nufpgxf} \} \backslash .$
16.  $k f_7 b k : t s s f \} k h \} g = \% * \text{ df } l b_0 P s f \} p b f x / o f 3 \text{ af} \{ \text{ nufpgxf} \} \backslash . l r q \text{ agf} P / ; d : o f ; d f w f g l j l w s f r / o f x \ddot{u} k p f \} u / l a e \} p g x f \} \backslash .$
17.  $l_j B_{f_{l_k}} \{ \chi_{nf_0} \{ k f_7 b k : t s s f \} k h \} g = \% * \text{ df } l b_0 P s f \} c E o f ; 7 s f \} g = 7 s f \} k z g \text{ xn ug } \{ n u f p g x f \} \backslash . p Q / ; \ddot{u} s f \} ; f y l ; \ddot{u} l e 8 f_0 h f R g \text{ nufpgxf} \} \backslash .$

d \backslash o f ^ a s g

1.  $l t d \} \} k : t s s f \} k l / l d l t s g \text{ xf} \} <$
2.  $k l / l d l t e g \} s \} s \} x f \} <$
3.  $c f o t f s f / j : t s f \} k l / l d l t l g s f N g \} ; \ddot{u} s \} x f \} <$
4.  $j u f \xi f / j : t s f \} k l / l d l t l g s f N g \} ; \ddot{u} s \} x f \} <$
5.  $s f_7 j f s f u h s f \text{ df} \{ \text{ nufpgxf} \} \backslash . k l / l d l t l g s f N g \text{ nufpgxf} \} \backslash .$
6.  $k f_7 b k : t s s f \} k h \} g = \% \& \text{ df } l b_0 P s f \} c E o f ; 7 s f \} k z g x \ddot{u} j f T o : t \} \} s l ; d s f k z g x \ddot{u} \text{ agf} P / \text{ xn ug} \{ \text{ nufpgxf} \} \backslash .$

kf7 3G6L M %

kl/ro

o; kf7df cfotfsf/ / jufsf/ cfs[txčsf] Ifqkn lgsfNg ; qxčsf af/uf hfgsf/L lbOPsf]  
5 . tl ; qxč kpřu u/] cfotfsf/ / jufsf/ cfs[txčsf] Ifqkn lgsfNg Jofjxfil/s ; d:ofxč  
; dfwfg ug{ ; lfd agfpg vřhPsf]5 .

p2řo

o; kf7sf]cGtodf ljbřylč lgDglnlvt sřfxč ug{ ; lfd xg]5g\\

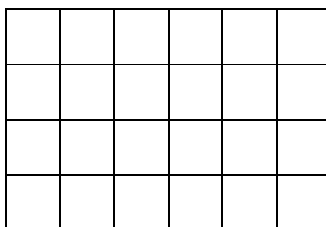
1. cfotfsf/ tyf jufsf/ j:tsř] Ifqkn lgsfNg ; q atfpg .
2. ; q kpřu u/] cfotfsf/ tyf jufsf/ j:txčsf] Ifqkn lgsfNg .
3. cfotfsf/ / jufsf/ cfs[txčsf] Ifqkn ; DaGWL ; /n Jofjxfil/s ; d:of xn ug{.

zřfs ; fduř

ljleGg cfsf/sf sf7 jf afSnř]sfuhsř 6řřfxč, jufsf/ sfřfxč sfř/Psf tyf gsřř/Psf  
cfotfsf/ tyf jufsf/ afSnř]sfuhsř 6řřfxč -3 × 1 cm<sup>2</sup>, 3 × 2 cm<sup>2</sup>, 3 × 3 cm<sup>2</sup>, 4 × 2 cm<sup>2</sup>,  
4 × 3 cm<sup>2</sup>, 5 × 4 cm<sup>2</sup>, 6 × 3 cm<sup>2</sup> etc.), :sř, l ; ; fsnd cřlb .

lzlf0ř; sf0 ljbřfsnfk

1. ljbřylčnf0{Ifqkn egřř]s]xř< křg ubřř5nkřn u/fpgxř] \\.
2. Istfa, sf7sf]6řřř, Hofldtlo afs; sf afřx/L 3řř sfřř. 3řřřeqsf] :yfgdf 5řř kf/] Ifqknřsf]  
wf/0řř lbpgxř] \\ . ljbřylčnf0{klg ; řřlcg;f/ sfřř{nufpgxř] \\.
3. nDař0 6 ; řd / řřřř0 4 ; řdsř]sfuhsř]6řřřdf sfřř sfřřř břřřpgxř] \\ . jufsf/ sfřřř ugř]  
Ifqkn lgsfNg nufpgxř] \\ . o:tf jufsf/ sfřřř sfřřřř sfuhxč lbP/ Ifqkn lgsfNg yk  
cEof; xč u/fpgxř] \\ . -; řd afřřř 0Gr :sřřdf klg sfřřřxč agř0{cEof; u/fpgxř] \\ .
4. ljbřylčnf0{ljleGg gřksř cfotfsf/ sfuhxč -gřk k0ř; ; aVofdf ePsf] h:t} 3 ; řd, 5 ; řd,  
6 ; řd, 8 ; řd, 10 ; řd\_ lbP/ ; řd :sřřdf jufsf/ sfřřřxč agřpg nufpgxř] \\ . ; řy} Ifqkn  
lgsfNg nufpgxř] \\.
5. ljbřylčnf0{ljleGg gřksř cfotfsf/ sfuhxč -tnřř] třlnřfcg;f/sř] gřk ePsf\_ lbpgxř] \\ /  
tnřř] třlnřř afřřř agřP/ egřř] \\.



olb sfuhsf]nDaf0 10 ;ld / rBf0 6 ;ld eP lqkn slt xhf, s;/l lgsfNg]kZg ugxf] \.  
klxn]tflnsf]9ftrf clwoog u/l pQ/ lbg nufpgxf] \ kl5 sf]f sf]f xg{nufpgxf] \.

To:t}sfuhsf]nDaf0 15 ;ld / rBf0 9 ;ld eP lqkn slt xhf, kZg ugxf] \.

| cfotfsf/ sfuhsf]nDaf0 | cfotfsf/ sfuhsf]rBf0 | cfotfsf/ sfuhsf]lqkn |
|-----------------------|----------------------|----------------------|
| 3 cm                  | 1 cm                 | 3 cm <sup>2</sup>    |
| 3 cm                  | 2 cm                 | 6 cm <sup>2</sup>    |
| 4 cm                  | 2 cm                 | 8 cm <sup>2</sup>    |
| 5 cm                  | 3 cm                 | 15 cm <sup>2</sup>   |
| 6 cm                  | 2 cm                 | 12 cm <sup>2</sup>   |
| 6 cm                  | 4 cm                 | 24 cm <sup>2</sup>   |
| 10 cm                 | 6 cm                 | 60 cm <sup>2</sup>   |
| 15 cm                 | 9cm                  | 135 cm <sup>2</sup>  |

6. dflysf]tflnsfaf6 cfotfsf/ ;txsf]nDaf0, rBf0 / lqknalsf] ;DaGw s:t]xbf] /x\$ <  
5nkn u/fpgxf] \ lgDglnlvt lgrBdf kfofpgxf] \

$$\text{cfotfsf/ ;txsf]lqkn} = \text{nDaf0} \times \text{rBf0}$$

$$\text{cyjf, } A = l \times b$$

7. nDaf0 8 ;ld / rBf0 5 ;ld gfk ePsf] cfotfsf/ sfuhsf]6j]f b]fpgxf] \-gfk Ps hgf  
ljBfylf0{gfk nufpgxf] \ / To;sf]lqkn ;q kbfu u/l xn u/l b]f0{lbgxf] \.

oxf,"

$$\text{cfotfsf/ sfuhsf]6j]f]sf]nDaf0 ( l ) = 8 \text{ cm}$$

$$\text{cfotfsf/ sfuhsf]6j]f]sf]rBf0 ( b ) = 5 \text{ cm}$$

$$\text{cfotfsf/ sfuhsf]6j]f]sf]lqkn ( A ) = <$$

;qcg";f/,

$$A = l \times b$$

$$= 8 \text{ cm} \times 5 \text{ cm}$$

$$= 40 \text{ cm}^2$$



5 ;ld

8 ;ld

8. ljBfylf0{nf0{kf7bk'tssf]kh g#^} df lb0Psf]pbfx/Of 1 clwoog u/l ;f] ;d:of afBdf xn  
ug{nufpgxf] \.

9.  $\{ \text{Bf} \} \{ \text{nf} \} \{ \text{kf} \} \{ \text{tk} \} \{ \text{ts} \} \{ \text{kh} \} \{ \text{g} \} \{ \text{!} \} \{ \text{df} \} \{ \text{lb} \} \{ \text{Ps} \} \{ \text{cEof} \}; 8 \{ \text{sf} \} \{ \text{g} \} \{ \text{1} \} \{ \text{sf} \} \{ \text{kZg} \} \{ \text{xn} \} \{ \text{ug} \} \{ \text{nufpgxf} \} \{ \backslash \} \{ \text{pQ} \} \{ \text{;f} \} \{ \text{f} \} \{ \text{yl} \}; \{ \text{le} \} \{ \text{8f0} \} \{ \text{hfRg} \} \{ \text{nufpgxf} \} \{ \backslash \} \{ \text{Pp6f} \} \{ \text{jufsf} \} \{ \text{sfuhsf} \} \{ \text{6j} \} \{ \text{f} \} \{ \text{b} \} \{ \text{fpgxf} \} \{ \backslash \} \{ \text{kZgf} \} \{ \text{ub} \} \{ \text{f} \} \{ \text{gDgfg} \}; \{ \text{f} \} \{ \text{;f} \} \{ \text{lgfng} \} \{ \text{nufpgxf} \} \{ \backslash \}$
10.  $\{ \text{Pp6f} \} \{ \text{jufsf} \} \{ \text{sfuhsf} \} \{ \text{6j} \} \{ \text{f} \} \{ \text{b} \} \{ \text{fpgxf} \} \{ \backslash \} \{ \text{kZgf} \} \{ \text{ub} \} \{ \text{f} \} \{ \text{gDgfg} \}; \{ \text{f} \} \{ \text{;f} \} \{ \text{lgfng} \} \{ \text{nufpgxf} \} \{ \backslash \}$

$$\{ \text{jufsf} \} \{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} = \{ \text{nDaf0} \} \times \{ \text{nDaf0} \}$$

$$= \{ \text{nDaf0} \}^2$$

$$\{ \text{f} \} \{ \text{kh} \} \{ \text{nnf0} \} \{ \text{A} \} \{ \text{/} \} \{ \text{nDaf0nf0} \} \{ \text{l} \} \{ \text{n} \} \{ \text{hgfpbf} \}$$

$\{ \text{;f} \}$

$$\{ \text{jufsf} \} \{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{A} \} = \{ \text{P} \} \times \{ \text{5} \}$$

11.  $\{ \text{5} \} \{ \text{;f} \} \{ \text{ld} \} \{ \text{nDaf0} \} \{ \text{ePs} \} \{ \text{jufsf} \} \{ \text{sfuhsf} \} \{ \text{6j} \} \{ \text{f} \} \{ \text{b} \} \{ \text{fpgxf} \} \{ \backslash \} \{ \text{o} \}; \{ \text{sf} \} \{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{slt} \} \{ \text{xf} \} \{ \text{hf} \} \{ \text{<} \}; \{ \text{;f} \} \{ \text{kp} \} \{ \text{f} \} \{ \text{u} \} \{ \text{/} \} \{ \text{lgfng} \} \{ \text{nufpgxf} \} \{ \backslash \} \{ \text{ldnfp} \} \{ \text{g} \} \{ \text{ld} \} \{ \text{nf0} \} \{ \text{Ps} \} \{ \text{hgfnf0} \} \{ \text{af} \} \{ \text{P} \} \{ \text{6f} \} \{ \text{xn} \} \{ \text{ug} \} \{ \text{nufpgxf} \} \{ \backslash \}$
12.  $\{ \text{Bf} \} \{ \text{nf} \} \{ \text{kf} \} \{ \text{tk} \} \{ \text{ts} \} \{ \text{kh} \} \{ \text{g} \} \{ \text{!} \} \{ \text{df} \} \{ \text{lb} \} \{ \text{Ps} \} \{ \text{pbfx} \} \{ \text{0f} \} \{ \text{3} \} \{ \text{c} \} \{ \text{Woo} \} \{ \text{g} \} \{ \text{u} \} \{ \text{/} \} \{ \text{f} \} \{ \text{;f} \} \{ \text{d} \} \{ \text{of} \} \{ \text{af} \} \{ \text{P} \} \{ \text{6f} \} \{ \text{xn} \} \{ \text{ug} \} \{ \text{nufpgxf} \} \{ \backslash \}$
13.  $\{ \text{Ps} \} \{ \text{hg} \} \{ \text{Bf} \} \{ \text{nf0} \} \{ \text{kf} \} \{ \text{tk} \} \{ \text{ts} \} \{ \text{kh} \} \{ \text{g} \} \{ \text{!} \} \{ \text{df} \} \{ \text{lb} \} \{ \text{Ps} \} \{ \text{cEof} \}; 8 \{ \text{sf} \} \{ \text{g} \} \{ \text{2} \} \{ \text{sf} \} \{ \text{kZg} \} \{ \text{af} \} \{ \text{P} \} \{ \text{6f} \} \{ \text{xn} \} \{ \text{ug} \} \{ \text{nufpgxf} \} \{ \backslash \}$

$\{ \text{d} \} \{ \text{nf} \} \{ \text{a} \} \{ \text{sg} \}$

1.  $\{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{eg} \} \{ \text{sf} \} \{ \text{s} \} \{ \text{x} \} \{ \text{f} \} \{ \text{<} \}$
2.  $\{ \text{ld} \} \{ \text{sf} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{s} \}; \{ \text{/} \} \{ \text{b} \} \{ \text{f} \} \{ \text{p} \} \{ \text{5} \} \{ \text{f} \} \{ \text{<} \}$
3.  $\{ \text{cfotfsf} \} \{ \text{j} \} \{ \text{tsf} \} \{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{lgfng} \}; \{ \text{;f} \} \{ \text{eg} \}$
4.  $\{ \text{jufsf} \} \{ \text{j} \} \{ \text{tsf} \} \{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{s} \}; \{ \text{/} \} \{ \text{lgfng} \} \{ \text{<} \}; \{ \text{;f} \} \{ \text{n} \} \{ \text{y} \}$
5.  $\{ \text{slf} \} \{ \text{sf} \} \{ \text{idf} \} \{ \text{pknAw} \} \{ \text{ePs} \} \{ \text{cfotfsf} \} \{ \text{j} \} \{ \text{jufsf} \} \{ \text{j} \} \{ \text{tsf} \} \{ \text{f} \} \{ \text{kh} \} \{ \text{in} \} \{ \text{lgfng} \} \{ \text{nufpgxf} \} \{ \backslash \}$
6.  $\{ \text{kf} \} \{ \text{tk} \} \{ \text{ts} \} \{ \text{kh} \} \{ \text{g} \} \{ \text{!} \} \{ \text{/} \} \{ \text{^} \} \{ \text{0} \} \{ \text{df} \} \{ \text{lb} \} \{ \text{Ps} \} \{ \text{cEof} \}; 8 \{ \text{sf} \} \{ \text{kZgx} \} \{ \text{j} \} \{ \text{To} \} \{ \text{t} \} \{ \text{kZgx} \} \{ \text{agfP} \} \{ \text{xn} \} \{ \text{ug} \} \{ \text{nufpgxf} \} \{ \backslash \}$



kl/ro

o; kf7df t/n kbfi{gfkg]ef8f / gfksf]Psf0sf]kl/ro lb0Psf]5 . ljeGg lsl;dsf ef8fsf]lfdtf lgsfngsf nflu ldlnd6/ / ln6/;ü ;DalGwt u0fg / efu ug{tyf tt\DaGWL ;/n Jofjxf]s ;d:of xn ug{;lfd agfpg vfhPsf]5 .

p27o

o; kf7sf]cGTodf ljbfi{g lgDglnlvt s/fxg ug{;lfd xg]5g\

1. t/n kbfi{gfkg]ef8fsf]gfd / gfksf]Psf0 atfpg .
2. ldlnd6/ / ln6/;ü ;DalGwt u0fg / efu ug{tyf tt\DaGWL ;/n Jofjxf]s ;d:of xn ug{.

z]lfs ;fdul

ljeGg cfsf/sf ef8fxg -h:t}af]n, lunf;, hu,afn6g, ufu], ldhl/<sup>a</sup> l;lnG8/, ln6/, vfg]t}h tyf bWsf kofs\$ cflb .

lzlf0fl;sf0 ljl0fsnfk

1. ljbfi{g}nf0{ k;ndf dl66t}h, vfg]t}h, bW h:tf t/n j:txg sh] gfk] alrG5, 5nkn u/fpgxf]\.
2. af]n, vfg]t}h tyf bWsf kofs\$gxg b]f0{To;sf n]vPsf gfksf]Psf0 kQf nufpg nufpgxf]\. 5nknaf6 't/n kbfi{gfkg]sf nflu kbfu ul/g]Psf0 ln6/ / ldlnd6/ xf] eGg]hfgsf/L lbgxf]\.
3. 1 ln6/ = 1000 ldlnd6/ xG5 egl hfgsf/L lbgxf]\.
4. ljbfi{g}nf0{kf7bk:tssf]kh g+^# df lb0Psf]pbfx/0f 1 afBdf u/] b]f0lbgxf]\.
5. pbfx/0fsf]h:t}kZgxg lb0{xn ug{nufpgxf]\ / s}l ljbfi{g}nf0{afBdf ug{nufpgxf]\.
6. sb}Pp6f af]nsf]lfdtf slt 5, kQf nufpg nufpgxf]\ / To; afBndf kfgl e/] slt k6sdf hu jf n]f el/G5 < lgsfng nufpgxf]\ / To;sf cfwf/df hu jf n]f]sf]lfdtf lgsfng ;xof] ugxf]\. h:t} af]nsf]lfdtf 250 ldlnd 5 / 6 k6sdf hu el/Pdf जगको क्षमता = 250 x 6 ldlnd = 1500 ldlnd = 1 ln 500 ldlnd
7. dflysf]h:t}tl/sfaf6 afn6g / ufu]sf]lfdtf s;/L lgsfng ;lsPnf < 5nkn u/fpgxf]\.
8. afBdf 3 ln6/ 400 ldlnd6/nf0{4 n]u0fg u/]b]f0lbgxf]\.

|    |      |
|----|------|
| ln | ldln |
| 3  | 400  |
| x  | 4    |
| 12 | 1600 |
| 13 | 600  |

$$1600 \text{ ldlnd} = 1 \text{ ln} + 600 \text{ ldlnd}$$

9. dflysf pbfx/0f h:t} kZgxč lb0{ xn ug{ nufpgxfj\ / s}l ljBfylhf0{ afBdf klg ug{ nufpgxfj\.
10. ljBfylčnf0{kf7bk'tssf]kjh g#^\$ df lb0Psf]pbfx/0f 3 afBdf lx;fa u/] aëf0lbgxfj\.
11. pbfx/0f 3 sf h:t}kZgxč lb0{xn ug{nufpgxfj\ / s}l ljBfylhf0{afBdf ug{nufpgxfj\.
12. ljBfylčnf0{kf7bk'tssf]kjh g#^\$ df lb0Psf]pbfx/0f 4 sf] ;d:of ;dfwfg ljlsf r/0fxč kpfj u/] aëf0lbgxfj\.
13. pbfx/0f 4 sf h:t}kZgxč lb0{xn ug{nufpgxfj\ / s}l ljBfylhf0{afBdf klg ug{nufpgxfj\.
14. ljBfylčnf0{kf7bk'tssf]kjh g#^% df lb0Psf]cEof; 9 sf kZg xn ug{nufpgxfj\.

dNof<sup>a</sup>sg

1. ahf/df kf0g]vfg]jhsf]kofs\$ sltslt kl/df0fdf xG5g\<
2. 5000 ldlnln6/ a/fa/ slt ln6/ xG5 <
3. kf7bk'tssf]kjh g#^% df lb0Psf]cEof; 9 sf h:tf kZgxč xn ug{nufpgxfj\.

yk ;ëfj

ljBfylč k}kl/Irt ePsf ljleGg ef8fxčsf]lfdtf cgdffg ug[vh vhfpgxfj\.

kl/ro

o; kf7c6tu{ cfotfsf/ if8dVf (cuboid) sf] cfotg ;q kpf] u/l lgsfNg] ljlpsnfksf af/}f 5nkn ul/Psf]5 . ;fy}o; ;qnf0{3g (cube) sf]cfotg lgsfNg klk kpf] ug{;lsg] s'f pNn] ul/Psf]5 .

p2]o

o; kf7sf]c6todf ljbfl{x lgDglnlvt s'fx{ ug{; lfd xg]5g||

1. cfotfsf/ if8dVf (cuboid) sf]nDaf0, rf}f0 / prf0 56bpg .
2. cfotfsf/ if8dVf (cuboid) sf]cfotg (volume) lgsfNg];q n]g .
3. ;q kpf] u/l cfotfsf/ if8dVf (cuboid) sf]cfotg kQf nufpg .

z]fs ;fdul

ljleGg gfkst]nDaf0, rf}f0 / prf0 ePsf gdbf cuboid x{, 8f0;, ;nf0{sf]a66f, rssf] a66f, 8:6/, a]6] Ans .

lzlf0f];sf0 ljlpsnfk

1. ljbfl{x;u 5nkn ub]lgs hljgdf kpf] xg]if8dVf (cuboid) sf]kl/ro lbgxf] \. To;kl5 cuboid sf]nDaf0, rf}f0 / prf0 56bpg nufpgxf] \.
2. ljbfl{x;nf0{ljleGg ;dxd ljeftg u/l Ps-Pscf} gdbf cuboid ljt/Of ugxf] \ / To;sf] nDaf0, rf}f0 / prf0 gfk nufpgxf] \.
3. Cuboid sf]cfotg (V) = nDaf0 (l)  $\times$  rf}f0 (b)  $\times$  prf0 (h) xg]xbf ljbfl{x;nf0{cf-cfGg];dxd k/]sf]cuboid sf]cfotg lgsfNg nufpgxf] \. lzlfns]ldn]gldn]sf]hRgxf] \.

h:t}|| sb}if8dVf (cuboid) sf]nDaf0 (l) = 5 cm, rf}f0 (b) = 4cm / prf0 (h) = 3 cm eP pSt if8dVfsf]cfotg (V) =  $5 \times 4 \times 3 = 60 \text{ cm}^3$  x65 .

4. olb sb}cuboid sf]nDaf0, rf}f0, prf0 a/fa/ 5 eg]To;nf0{3g (cube) elg65 / 3gsf] cfotg (V) =  $1 \times 1 \times 1 = 1^3$  x65 egl k]6 kfl/lbgxf] \.

gf6 || tlgcf} p:tfp:t};aVofx{sf]u0fgkn 3g;aVof ePh:t}3gsf] cfotg klk tlgcf} p:tfp:t}5px{sf]gfkst]u0fgaf6 lgsfNg5 .

5. cEof; 10 -kf70k'ts\_ sf ;d:ofxč ;dfwfg ug{ tl/sf atf0lbgxfj}\ / sxl gdbg kZgxč ;dfwfg ul/lbgxfj}\.

dNof<sup>a</sup>sg

1. Pp6f ;nf0sfj a66fsfj nDaf0 4.5 cm, rf8f0 3cm / prf0 2cm eP pSt ;nf0sfj a66fsfj cfotg slt xfhf <
2. 90 cm<sup>3</sup> cfotg ePsfjd;lsfja66fsfj nDaf0 6 cm / rf8f0 5 cm eP prf0 slt xfhf <

yk ;eifj

7fj j:tsfj h:t} 8f0;, a]6j Ans kpfj u/] ljBfyl{f0{ cfotg;Da6wl ;d:of ;dfwfg ug{ nufpgxfj}\.

kl/ro

o; kf7df tfh gfkglPsf0xǃalrsf]cfk;l ; DaGw vfhL ugI ltglxǃnf0{u0fg jf efu u/7 Ps  
csf0f ǃkfǃt/0f ugI / gfk tfh; DaGwL ; /n JofjxfI/s ; d:ofxǃ ; dfwfg ugI tl/sfaf/] 5nknn ul/Psf]5 .

p27o

o; kf7sf]cǃTodf IjBfylǃǃ lgDglnlvt s'fxǃ ug{; lfd xg]5g\Ⅲ

1. ufd / lsnf]ufdsf]u0fg / efu ug{ / Pscfk; df ǃkfǃt/0f ug{.
2. u0fg / efu; DaGwL ; /n JofjxfI/s ; d:ofxǃ ; dfwfg ug{.
3. IjleGg j:txǃsf]tfh cǃbhf ug{.

z7fs ; fduI

100 ufdby 100 lsu[sf 9sxǃ, tfhsf]ǃkfǃt/0f; DaGwL rf6ǃǃ .

IzIf0fl; sf0 Ij7ofsnfk

1. IjBfylǃǃnf0{100 ufd, 200 ufd, 500 ufd, 1 lsnf]ufd, 5 lsnf]ufd, / 10 lsnf]ufdsf 9sxǃ  
by7sf 5f]egl k7g ugI/ ltglxǃd7o]sg ; aǃǃbf ux7xfnf egl k7g ug{f} \.
2. To; kl5 dfly pNn7y u/7cg'; f/sf 9sxǃ IjBfylǃǃnf0{ kfnkfn] prfng nufpgxf] \ / tfh  
cǃbfg ug{nufpgxf] \.
3. tfh; DaGwL ǃkfǃt/0f rf6{by7fb}To; nf0{/fd/L c7oog ug{nufpgxf] \.

h:t}Ⅲ

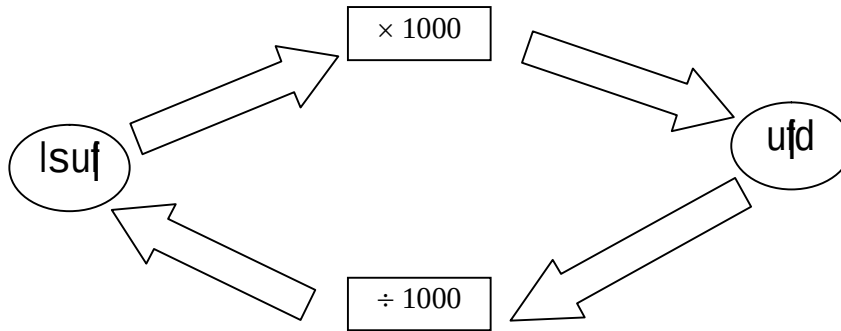
1 lsnf]ufdsf]9s = 2 cǃf 500 ufd -c7wf lsnf] sf 9sxǃ

= 5 cǃf 200 ufdsf 9sxǃ

= 10 cǃf 100 ufdsf 9sxǃ

= 1000 ufd

4. To; 7]1 lsuf = 1000 ufd xg]xbf tnsf]ǃkfǃt/0f tflnsf cg'; f/ ǃkfǃt/0f ug{I; sfpgxf] \.



o;af6 lsufnf0{ufddf ħkġt/0f ubf{1000 n]u0fg ugkb5 / ufdnf0{lsuf df ħkġt/0f ubf{1000 n]efu ugkb5 eg]s/f k|6 xġ5 .

pbfx/0f ℳ

- (i) 4.5 lsuf nf0{ufddf ħkġt/0f u/ ℳ

oxf“

$$1 \text{ lsuf} = 1000 \text{ ufd}$$

$$4.5 \text{ lsuf} = 1000 \times 4.5 = 4500 \text{ ufd}$$

- (ii) 275 ufdnf0{lsufdf ħkġt/0f u/ ℳ

oxf“

$$1000 \text{ ufd} = 1 \text{ lsuf}$$

$$275 \text{ ufd} = 275 \div 1000 = 0.275 \text{ lsuf}$$

5. lsuf / ufd ldl>t ;d:ofxġ ;dfwfg ubf{ufd / lsufnf0{566f566}lx;fa u/l cġtdf ħkġt/0f ug{;sfpg'pkoSt xġ5 .

pbfx/0f ℳ

- (i) 1 Kofsġ rfdnsf]tġ 2 lsuf 150 ufd 5 eg]10 Kofsġ rfdnsf]hDdf tġ slt xġf <

oxf“

10 Kofs\$ rfdnsf] tñ 1 Kofs\$ sf] 10 u0f a9L x65 .

To ;ñ] lsuf / ufdnf0{566f566}u0fg ubf{

| <u>lsuf</u> | <u>ufd</u> |
|-------------|------------|
| 2           | 150        |
| <hr/>       |            |
|             | × 10       |
| 20          | 1500       |
| +1          | -1000      |
| <hr/>       |            |
| 21          | 500        |

∴ 10 Kofs\$ rfdnsf] h0df tñ 21 lsuf 500 ufd x65 .

o;nf0{lg0glnlvt tl/sfn]klg ug{;ls65 ||

1 Kofs\$ rfdnsf] tñ = 2.150 lsuf

10 Kofs\$ rfdnsf] tñ = 2.150 × 10

= 21.500 lsuf

= 21 lsuf 500 ufd

(ii) 15.6 lsuf :ofp 30 hgf ljBfyl{a/fa/ af8bf x/ş ljBfyl] slt tñ a/fa/sf]:ofp kfp5g\<

oxf“

15.6 lsuf :ofpnf0{30 efu nufpgkb5 .

To;h]

|     |      |        |
|-----|------|--------|
|     | lsuf | ufd    |
|     | 0    | 520    |
| 30) | 15   | 600(   |
|     | 0    |        |
|     | 15   | 600    |
|     |      | +15000 |
|     |      | 15600  |
|     |      | - 150  |
|     |      | 600    |
|     |      | -60    |
|     |      | 0      |
|     |      | 0      |
|     |      | x      |

∴ x/5 ljBfylh]520 ufd :ofp kfp5g\.

6. kf7bk'tssf]cEof; 11.1 sf ;d:ofx; ;dfwfg ug{kf];flxt ug{kf];\.

d\lof<sup>a</sup>sg

1.  $5\frac{1}{4}$  lsufnf0{ufddf / 350 ufdnf0{lsuf df ;kf;t/of u/ .
2. u0fg u/ || 16 lsuf 270 ufd nf0{ 5 n].
3.  $3\frac{1}{4}$  lsuf :ofp 25 hgfnf0{a/fa/ afl8of]eg]k[o;n]slt :ofp kfpnfg\<



kl/ro

o; kf7df leġsf] kl/ro, leġsf] hfġ, 36fp, u0fg tyf leġ / bzdni]alsf] ; DaĠw / bzdni ; <sup>a</sup>vofsf]hfġ tyf 36fp ug]tl/sfxġsf af/ġf 5nk<sup>n</sup> ul/g]5 .

p27o

o; kf7sf]cĠtoġf l]Bfyġġ lgDglnlvt s'fxġ ug{; lfd xg]5g\

1. ;dfg x/ tyf c;dfg x/ ePsf leġsf]hfġ / 36fp ug{.
2. k0ff<sup>a</sup>sn]leġgnf0{u0fg ug{.
3. ;dfg tyf c;dfg x/ ePsf leġsf]u0fg ug{.
4. leġ / bzdni]alsf]cĠt/; DaĠw atfpg .
5. bzdni ; <sup>a</sup>vofsf]hfġ ug{.
6. :yfgdfg tflnsf cg';f/ bzfz, ;ofz, xhf/fz :yfgsf]c<sup>a</sup>s atfpg / bzdni zĠofġt ug{.
7. bzdni leġgnf0{10, 100, 1000 n]u0fg u/L u0fgk<sup>n</sup> kQf nufpg .

z]fs ;fduġ

leġsf l]leġ dġBnxġ, Ġohkġ/, ;f0gkġ, k<sup>n</sup>ġf]sk kġ/, kf7b<sup>k</sup>:ts cflb .

lzlfofl;sf0 l]ġofsnfk

## 1. ldl&gt;t leġsf]hfġ

o;sf nflu ;d:of zflAbs ;d:ofaf6 ;? ug]f] \ h:t} Pp6f sfuhnfo{b0{a/fa/ efu xg]2 k6s k6bfp<sup>g</sup>xf] \. o;sf] s:t] lrq aĠ5, k6bfp/ b]yfp<sup>g</sup> / o;nfo{ ul0ftlo efiffdf n]y<sup>g</sup> nufpgxf] \.

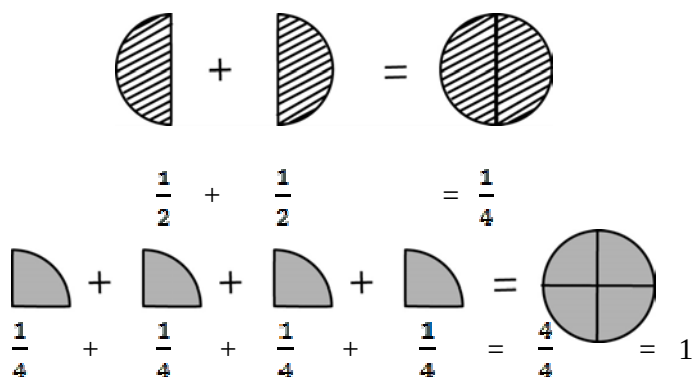
klxnf]k6s sfuh a/fa/ efu k6bfpb<sup>f</sup>, 5fof kfbf{5fof kf/ġf]efunfo{n]y<sup>g</sup> ;lsĠ5 .

$$\frac{\text{shaded box}}{\text{total box}} = \frac{1}{2}$$

b]f] k6s sfuh kġ/ a/fa/ xg]u/L k6bfpb<sup>f</sup> / 5fof kfbf{5fof kf/ġf]efunfo{n]y<sup>g</sup> ;lsĠ5 .

$$\frac{\text{shaded box}}{\text{total box}} = \frac{1}{4}$$

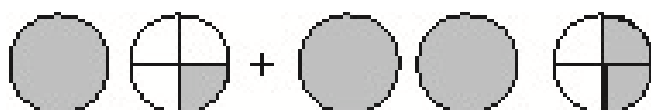
dflysf] cEof; yk ug{ ;lsG5 . o;af6 leGgsf] c]wf/0ff yk :ki6 kfg{Pp6f j:thf0{l;^uf j:tsf]cfsf/ p:t}aG5 .



dflysf 2 c]f pbfx/0faf6 k|6 ug{ ;lsG5 ls ;dfg x/ ePsf leGgsf] hfB ubf{c# c# hf]8G5, h:t}||

$$\frac{1}{3} + \frac{1}{3} = \frac{1+1}{3} = \frac{2}{3}$$

To;u/L,



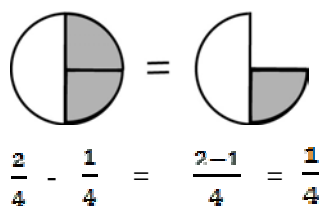
$$1\frac{1}{4} + 2\frac{2}{4} = ?$$



$$1\frac{1}{4} + 2\frac{2}{4} = (1+2)\left(\frac{1}{4} + \frac{2}{4}\right) = 3\frac{3}{4}$$

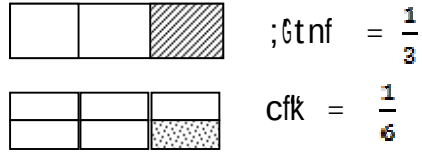
;dfg x/ ePsf leGgdf koff{^s;ü koff{^s hfB] / leGg ;^Vofsf]c# c# dfq hf]8G5 .

2. ldl>t leGgsf]36fp ||

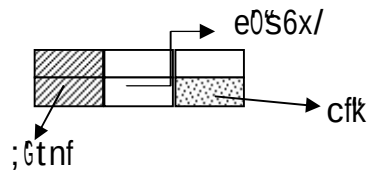


Pp6f au}fdf  $\frac{1}{3}$  efudf ;Gtnf /  $\frac{1}{6}$  efudf cfk nuf0Psf]/x5 . afSl efudf e0\$6x/ nuf0Psf]/x5 eg]slt efudf e0\$6x/ nuf0Psf]/x5 <

oxf,



au}fdf cfk, ;Gtnf tyf e0\$6x/ lfq byfpbf,



$$;Gtnf = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

$$cfk = \frac{1}{6}$$

$$;Gtnf + cfksf]lfq = \frac{2}{6} + \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$$

vfnl sf}fdf e0\$6x/ nuf0Psf]/x5 .

$$vfnl lfq = \frac{vfnl lfq}{h0df lfq} = \frac{3}{6} = \frac{1}{2}$$

csf]tl/sf,

$$;Gtnf = \frac{1}{3}$$

$$cfk = \frac{1}{6}$$

e0\$6s/ = ?

$$;Gtnf + cfksf]lfq = \frac{1}{3} + \frac{1}{6} = \frac{1 \times 2}{3 \times 2} + \frac{1}{6} = \frac{2}{6} + \frac{1}{6} = \frac{2+1}{6} = \frac{3}{6} = \frac{1}{2}$$

$$e0$6x/sf]lfq = k/f au}f - ;Gtnf + cfksf]lfq$$

$$= 1 - \frac{1}{2} = \frac{1}{2}$$

### 3. **ldl>t ;<sup>a</sup>Vofsf]36fP** ||

o;df klg ldl>t ;<sup>a</sup>Vofsf]hfB h:t}u/L l;<sup>a</sup>uf];<sup>a</sup>Vofaf6 -kOf{<sup>a</sup>Vof\_ / leGg ;<sup>a</sup>Vofaf6 36fP/ ug{;lsG5 .

$$13\frac{1}{4} - 9\frac{11}{12}$$

$$\text{kOf}\{;^a\text{Vof} = (13 - 9)$$

$$\text{leGg ;}^a\text{Vof} = \left(\frac{1}{4} - \frac{11}{12}\right)$$

$$\text{ca, } (13 - 9) \left(\frac{1}{4} - \frac{11}{12}\right)$$

$$= 4 \left(\frac{1 \times 3}{4 \times 3} - \frac{11}{12}\right)$$

$$= 4 \left(\frac{3}{12} - \frac{11}{12}\right)$$

$$= 3 \left(\frac{12}{12} + \frac{3}{12} - \frac{11}{12}\right)$$

$$= 3 \left(\frac{12+3-11}{12}\right)$$

$$= 3 \times \frac{4}{12}$$

$$= 3\frac{1}{3}$$

### 4. **leGgsf]u0fg** ||



dflysflleGgnf0{ul0ftlo efifdf nYbf,

$$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 1\frac{1}{2}$$

cfwf slt k6s hf]8Psf]5 <

cfwf 3 k6s hf]8Psf]5 . cyf{,

$$3 \times \frac{1}{2} = \frac{3}{2} = 1\frac{1}{2}$$

ct|| leGgnf0{kOf{<sup>a</sup>sn] u0fg ubf{kOf{<sup>a</sup>sn] leGgsf] cznf0{u0fg u/L leGgsf] x/ pXL /xG5 . o;/L cfpg]leGg cgkoSt eP o;nfo{ldl>t ;<sup>a</sup>Vofdf ĆkfGt/0f ug{k5{.

h:t}

$$3 \times \frac{2}{4} = \frac{3 \times 2}{4} = \frac{6}{4} = \frac{3}{2}$$

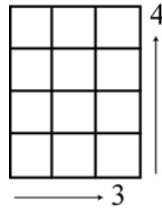
$\frac{3}{2}$  cgkoSt leGg eof]. ca o;nf0{pkoSt leGg agfpbf,

$$\frac{3}{2} = 1\frac{1}{2} \text{ ldl>t leGgdf /fvgkb5 .}$$

(ii)  $\frac{1}{3} \times \frac{1}{4}$  nf0{u0fg ugxf} \.

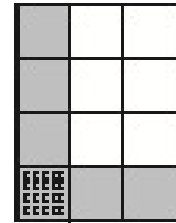
$$\frac{1}{3} \times \frac{1}{4} \text{ eGgn} \frac{1}{3} \text{ k6s } \frac{1}{4} \text{ eGg]abfp5 .}$$

o;nf0{lrqaf6 k|tt ubf{



dflysf]sf]f ; aVof to ubf{b]}leGgsf]x/nf0{row / column  
dfGg] h:t} 3 nf0{row / 4 nf0{column dfGg ;lsG5 .

ca dflysf]ufkndf  $\frac{1}{3} / \frac{1}{4}$  nf0{b]vfpbf,



bxf]f]5fof k/}f]efu slt 5 <

Pp6f sf]f 5 cyf{,  $\frac{1}{12}$  5 .

bxf]f]5fof k/}f]efunf0{u0fg elgG5 .

$$\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$$

t;y{c;dfg x/ ePsf leGgsf]u0fg ubf{c# c#;ü / x/ x/;ü u0fg ul/G5 .

h:t}

$$\frac{1}{2} \times \frac{1}{3} = \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$$

To:t}

$$\frac{3}{4} \times \frac{5}{7} = \frac{3 \times 5}{4 \times 7} = \frac{15}{28}$$

5. **bzdnj / leGgsf]kft/Of** ||

(i)

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|  |  |  |  |  |

leGg nYg nufpgxf] \.

leGgdf nYbf  $\frac{1}{10}$  / o; nf0{bzdnjdf nYbf 0.1 nYvG5 .

To:t}x/ 10 ePsf leGg k|t't ug{nufpg] h:t}

$\frac{1}{10}, \frac{2}{10}, \frac{3}{10}, \frac{4}{10}, \frac{8}{10}, \frac{9}{10}$

dflysf x/ 10 ePsf leGgnf0{bzdnjdf nYbf,

$\frac{1}{10} = 0.1, \frac{2}{10} = 0.2, \frac{3}{10} = 0.3, \frac{4}{10} = 0.4, \frac{8}{10} = 0.8, \frac{9}{10} = 0.9$

(ii)

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
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5fof k/]sf] efunf0{ul0ftlo efiffdf nYbf  $\frac{1}{100}$  xG5 / o; nf0{bzdnjdf nYbf 0.01 nYvG5 .

To:t}  $\frac{2}{100}, \frac{3}{100}, \frac{10}{100}, \frac{25}{100}$  nf0{; ofzdf nYg]cEof; u/fpgxf] \.

(iii) leGgnf0{bzdnjdf abn

$\frac{1}{2}, \frac{1}{5}$  nf0{bzdnjdf abn .

lb0Psf]leGgsf]x/ 10 agfpbf

$\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10} = 0.5$

To: t}

$$\frac{1}{5} = \frac{1 \times 2}{5 \times 2} = \frac{2}{10} = 0.2$$

ctll leGgnf0{bzdndjdf abNbf leGgsf]x/ 10 agf0{c#nf0{efu ugkb5 .

(iv) bzdndjnf0{leGgdf abn

0.5, 0.2, 0.3, 0.7 nf0{leGgdf abn .

$$0.5 = \frac{5}{10}$$

$$0.7 = \frac{7}{10}$$

To: t}

$$0.07 = \frac{7}{100}$$

$$0.007 = \frac{7}{1000}$$

bzdndjnf0{leGgdf abNbf k0ff{snf0{h:tfst]t:t}/fvl bzdndjsf]:yfg x]l bzfx,  
; of# / xhf/f#df JoSt ugkb5 .

(v) :yfgdfg tflnsf kpf] u/l bzdndjdf 2kfGt/Of

| b; | PS | b;f# | ; of# | xhf/f# |
|----|----|------|-------|--------|
|    |    |      |       |        |

tnsf ;^vofnf0{:yfgdfg tflnsfdf /fvg nufpg]

16.10, 0.25, 1.25, 13.04

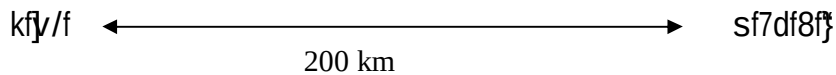
## 6. bzdndjsf]hf# / 36fp

0.06 + 0.32

dflf lb0Psf ;^vofsf]:yfg kQf nufpg]/ :yfg cg';f/ hfBb].

$$\begin{array}{r} 0.06 \\ + 0.32 \\ \hline 0.38 \end{array}$$

; /n u/



kfy/f klg a;af6 103.675 km / 6bfS;laf6 73.025 km ofqf ubf{kfy/f klg slt km afSl /xG5 <

a; / 6bfS;ldf ofqf ubf{sf]slt km xG5 <

$$\begin{array}{r} 103.675 \\ + 73.025 \\ \hline 176.700 \text{ km} \end{array}$$

kfy/f sf7df8f6 200 km 5 .

$$\text{afSl ofqf} = 200 - 176.700 = 23.300 \text{ km}$$

## 7. bzdnsf]u0fg

$$\begin{aligned} \text{(i)} \quad 0.4 \times 2 &= \frac{4}{10} \times 2 \text{-bzdnsfnf0\{leGgdf abNbf\_} \\ &= \frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10} = 0.8 \text{-leGgnf0\{bzdnsjdf abNbf\_} \end{aligned}$$

csf]ijlw

$$0.4 \times 2 = 0.4 \text{ slt k6s hf]8Psf]5 <}$$

$$0.4 + 0.4 = 0.8$$

$$\text{(ii)} \quad 0.5 \times 2 = ?$$

$$0.5 \times 2$$

$$\begin{aligned} &= \frac{5}{10} \times \frac{2}{10} \text{-bzdnsfnf0\{leGgdf abNbf\_} \\ &= \frac{10}{100} \text{-;dfg x/ ePsf]leGgsf]u0fg\_} \end{aligned}$$

$$= 0.01$$

t;y{bzdnsf] u0fg ubf{ ;fwf/0f ;^Vofsf] u0fg ug[klj]ofn] g} ul/G5 . u0fgk^ndf u0fgv08xGdf ePsf]bzdnsj :yfgnf0{a/fa/ ul/G5 .



(iii)  $3.57 \times 12$

$$\begin{array}{r} 3.57 \\ \times 12 \\ \hline 714 \\ 357 \\ \hline 4284 \end{array}$$

ca bzdñj slt :yfgdf 5 < b0{:yfgdf 5 .

To;h] 4284 = 42.84 -k5fl8af6 b0{yfgkl5 bzdñj lbg]

8. bzdñjnf0{10, 100 / 1000 n]u0fg ugI

(i)



$$= \frac{10}{10} = 1$$

$$0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1$$

$$0.1 \times 10 = \frac{1}{10} \times 10 = 1$$

(ii)  $0.3 \times 10 = \frac{3}{10} \times 10 = 3$

(iii)  $0.1 \times 0.1 = \frac{1}{10} \times \frac{1}{10} = \frac{1}{100} = 0.01$

(iv)  $0.1 \times 100 = 10.0 = 10$

$$0.1 \times 1000 = 100.0 = 100$$

$$0.002 \times 100 = 0.200 = 0.2$$

To;h] bzdñjnf0{10 n]u0fg ubf{bzdñjalr Ps :yfg bfof ;5{jf x65, To;h] bzdñjnf0{100, 1000 n]u0fg bzdñj lrxg jldzll b0{/ tlg :yfg bfof ;5{jf x65g\.

9. bzdñj;DaGwl Jofjxfll/s ;d:ofxç

12 j6f ;çtnf klt ufç ?= 2.25 sf b/n]hDdf dNo slt k5{<

dflysf] ;d:of ;dfwgsf nflu tnsf] tflnsf k|t't ul/Psf]5 .

| ;Gtnfsf] ; <sup>a</sup> Vof | ;Gtnfsf] dNo -?=-    |
|-----------------------------|----------------------|
| 1                           | 2.25                 |
| 2                           | 2.25 + 2.25 = 4.50   |
| 3                           | 4.50 + 2.25 = 6.75   |
| 4                           | 6.75 + 2.25 = 9.00   |
| 5                           | 9.00 + 2.25 = 11.25  |
| 6                           | 11.25 + 2.25 = 13.50 |
| 7                           | 13.50 + 2.25 = 15.75 |
| 8                           | 15.75 + 2.25 = 18.00 |
| 9                           | 18.00 + 2.25 = 20.25 |
| 10                          | 20.25 + 2.25 = 22.50 |
| 11                          | 22.50 + 2.25 = 24.75 |
| 12                          | 24.75 + 2.25 = 27.00 |

dflysf] tflnsf j:t' tyf To; sf] dNoaf/] hfgsf/ l lng ;lsg]5 .

Pp6f ;Gtnfsf] dNo = ? 2.25

2 cfbf ;Gtnfsf] dNo = ? 2.25 + 2.25 = ? 4.50

cyjff,  $2.25 \times 2 = ? 4.50$

To; f]eP, 12 cfbf ;Gtnfsf] dNo = ?  $2.25 \times 12 = ? 27.50$

## 10. bzdnjsf] zGofGt

/fd; ũ 9 ?lkoŕ"5 . p;n] 9 ?lkoŕ"8 hgfnf0{a/fa/ kŭg] u/l af85 eg] kŭoŕnf0{slt slt efudf kb5 <

8 hgfnf0{?=- 1 sf b/n] afl8of]. ca ȳ= 1 afSl /xG5 .

ca ?=- 1 nf0{8 efu ubf{ $\frac{1}{8}$  = 0.125

?=- 1 / 0.125 hf8bf = 1.125 xG5 .

1.125 nf0{b0{:yfgdf zGofGt ubf{ 1.13 nŭvG5 .

To:t}Ps :yfgdf zGofGt ubf{1.10 xG5 .

o;/l zGofGt ubf{zGō ug[kg]:yfgsf] ;<sup>a</sup>Vof 5 cyjff 5 eGbf 7hf]5 eg]Tof]:yfgdf zGō kf/l afofs]:yfgdf 1 hf8bf] ug[k5{. olb zGō kfg[kg]:yfgsf] ;<sup>a</sup>Vof 5 eGbf ;fgf]5 eg]Tof]:yfgdf zGō nŭl afof":yfgsf]c<sup>a</sup>s h:tfsf]t:t}nŭvG5 .

d\lof<sup>a</sup>sg

1. leCgsf]h<sup>3</sup>

(i)  $3\frac{1}{2} + 2\frac{1}{2}$

(ii)  $7\frac{1}{3} + 2\frac{5}{6}$

2. leCgsf]36fp

(i)  $10\frac{4}{2} - 3\frac{4}{10}$

(ii)  $5 - 1\frac{1}{2} - \frac{5}{8}$

3. /fdn]Pp6f sfdsf]<sup>1</sup>/<sub>3</sub>efu / Zofdn]<sup>1</sup>/<sub>3</sub>efu sfd u/5g\eg]af\$<sub>L</sub> sfd z<sup>a</sup>s/nf0{ug{lbP5g\eg]  
z<sup>a</sup>s/n]u/5f]sfd slt efu lyof]<

4.  $\frac{1}{4} \times \frac{1}{3}$  nf0{leCgdf lrqdf u/] b]vfp<sub>||</sub> .

5. leCgnf0{bzdnjdf abn

(i)  $15\frac{1}{5}$

(ii) 0.007 nf0{leCgdf kl/j t<sub>g</sub> u/ .

(iii) 0.234 nf0{:yfgdfg tflnsfdf b]vpgxf]<sub>||</sub>\.

6. ;/n u/

$$3.5 - 4.35 + 4.02$$

7.  $2.07 / 4.27$  sf]of]<sub>||</sub>kn 5.50 eGb<sup>f</sup> sltn]a9<sub>L</sub> x65 <

8.  $10.85 \times 1000 = ?$

p240

o; kf7sf]cGTodf l jBfyLk; lgDglnlvt s'fx; ug{; lfd xg]5g\m

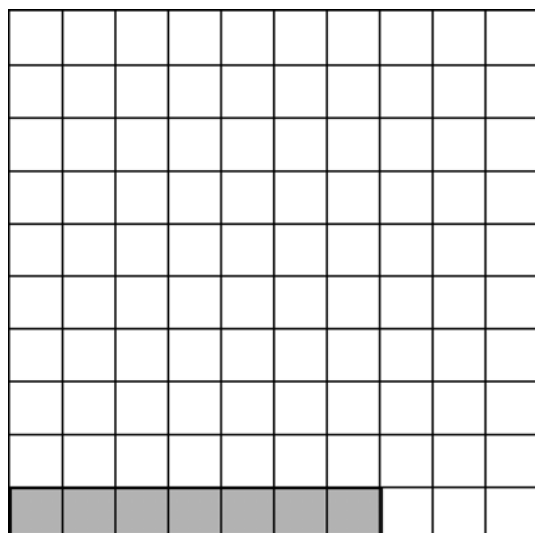
1. leGg tyf k|tztnf0{Pscfk;df 2kfGt/Of ug{.
2. k|tztn;DaGwL ;/n Jofjxfl/s ;d:of xn ug{.

zifs ; fdu

uŋk<sup>m</sup> k<sup>k</sup>/, ;f<sup>0</sup>g k<sup>g</sup>, ud, Gohk<sup>k</sup>/ cflb .

lzlf0fl;sf0 ljdofsnfk

1.  $u^k m$  rf6{5fof kf/}sf]efunf0{leGgdf n}v .



leGgdf nYbf,  $\frac{7}{100}$



$$100 \times \frac{3}{4}$$

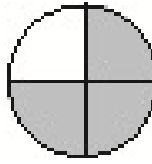
$$= 100 \times \frac{3}{4}$$

$$= 25 \times 3$$

$$= 75\%$$

$$\text{To; } \frac{3}{4} = 75\%$$

dflysf]lrqnf0{100 dfg] 4 efudf af8bf 1 efu a/fa/ 25% xG5 .

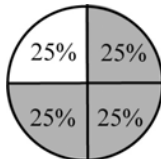


5fof kf/Psf]efu dfq slt % 5 n]gxf] \.

$$5fof kf/Psf]efu dfq 3 efu 5 \text{ To; } \frac{3}{4} 25\% + 25\% + 25\% = \frac{3}{4}$$

$$75\% = \frac{3}{4}$$

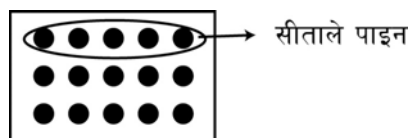
3. kf/bzL{k}/df 10 x10 ju\$]b0cf] lgDg l;6 tof/ ug]



$$\frac{3}{4} \times \frac{100}{100} = \frac{75}{100} = 75\%$$

Pp6f ju\$]/ kf/bzL{k}/df lrqdf b]fP h:t}4 efu nuf0{3 efudf /a nufpgxf] \ / pxl ;f0hsf]csf[k]/df 10x10 ju\$]sf]f agf0{b0{k}/ Ps csf]dfly vK6ofpbf b]fPsf] 75% aG5 .

4. 20 j6f uRrf ePsf]aS;af6 5 cf]f uRrf /fdn] ;ltfn0{lbof]eg] ;ltfn] slt k|tzt uRrf kf0g\<



dflysf] aS;df hDdf uRrf ;<sup>a</sup>Vof = 20

;ltfn]kfPsf]uRrf ;<sup>a</sup>Vof = 5

ca ;ltfn]slt k|tzt uRrf kf0g\< s;/l yxf kfpg]<

dflysf];d:ofnf0{b0{t|/sfaf6 xn ug{nufpg]

**klxfn]t|/sf**

;ltfn]kfPsf]uRrf =  $\frac{5}{20}$  -leGgdf n<sup>y</sup>bf\_

x/ 100 agfpg s]ugI<

$$\frac{5}{20} = \frac{5 \times 5}{20 \times 5} = \frac{25}{100} = 25\%$$

**csf]t|/sf** ||

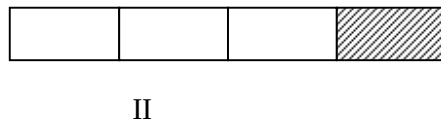
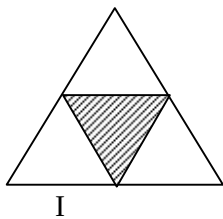
20 c<sup>f</sup> uRrfd 5 j6f uRrf ;ltfn]kf0g\.

o;nf0{leGgdf n<sup>y</sup>bf

20 c<sup>f</sup> uRrfd ;ltfn]kfPsf]uRrf =  $\frac{5}{20}$

100 c<sup>f</sup>fd =  $\frac{5}{20} \times 100 = 25\%$

5. leGg rf6sf]k<sup>f</sup> u/ k|tzt lgsfn<sup>g</sup> ;ls65 .



dfly lb0Psf lrqdf 5f k/3f]efunf0{ul0ftlo efifdf n<sup>y</sup>gxf]\.

lrq I =  $\frac{3}{4}$

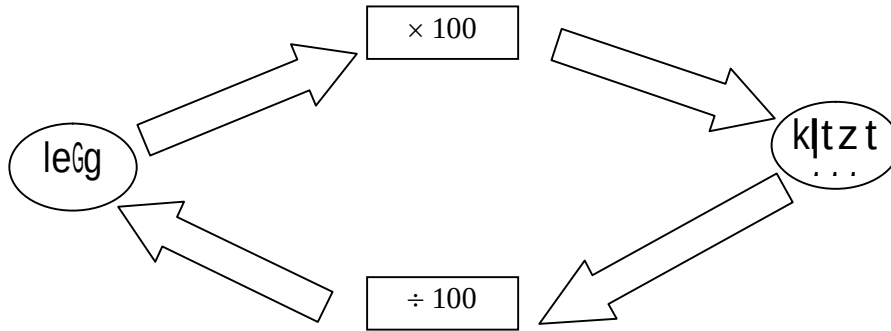
lrq II =  $\frac{1}{4}$

dflysf]leGgnf0{k|tzt df 2kfGt/0f ug{sg ljlw ckgfpg]< ljr f/ ugxf]\.

o;sf nflu b}leGsf]x/ / c#df 100 n]u0ff ubf{x/ 100 ePsf leGg xG5g\.

I.  $\frac{3}{4} = \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 75\%$

II.  $\frac{1}{4} = \frac{1 \times 25}{4 \times 25} = \frac{25}{100} = 25\%$



dflysf] lraqaf6 leGg / k|tzt nfo{Pscsfdf }kfGt/Of ugI tl/sfsf }kdf lnOG5 . cyf{ k|tzt nfo{leGgdf abNg lbOPsf] k|tzt hgfpq] ;<sup>a</sup>VofnfO{100 n]efu ugkb5 , h:t} 25% nfo{leGgdf abNbf  $\frac{25}{100} \times 5$  .

To:t} leGgnfo{ k|tzt df n]ffbf lbOPsf]  $\frac{100}{100}$  leGgnfo{ n]u0ff ugkb5 . h:t} 10

$$\frac{1}{10} \times \frac{100}{100} = 10\%$$

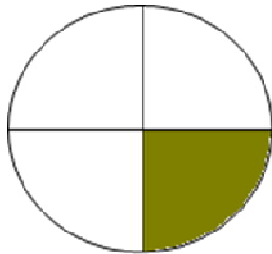
dNof<sup>a</sup>sg

dfly p|Nnlvt k|o} lzlfOf];sf0 lj|ofsnfks} j|ddf ljBfy.{ dNof<sup>a</sup>sg lg/Gt/ ugkb5 . dNof<sup>a</sup>sgsf b}fosf gdbg kZg ug{;lsG5 11

1. tn lbOPsf leGgnfo{ k|tzt df }kfGt/Of ugkb5 12

$$\frac{1}{2}, \frac{1}{5}, \frac{3}{4}, \frac{1}{10}, \frac{2}{5} \text{ cflb .}$$

2. lraqdf 5fof k/}f]efunfo{ul0ftlo efiffdf n]b}5fof k/}f]efu slt k|tzt xfhf <





3. 25% nf0{tnsf d\lo]sgn]hgfp5 <

-s\_  $\frac{25}{10}$  -v\_  $\frac{25}{1000}$  -u\_  $\frac{25}{100}$  -3\_ dflysf];a}.

4. 75% nf0{leGgdf abn .

5. Zofdn]lj1fgsf]75 koff{ssf]k/lffdf 45 c<sup>a</sup>s Nofof]eg]slt kltzt c<sup>a</sup>s Nofof]xf]hf <

## Unitary Method / Simple Interest

Chapter 8

Example

A sum of Rs. 1000 is invested at 5% per annum simple interest. Find the amount after 2 years.

Solution

Given: Principal = Rs. 1000, Rate = 5% per annum, Time = 2 years

1. Simple interest =  $\frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$
2. Simple interest =  $\frac{1000 \times 5 \times 2}{100}$

Interest = Rs. 100

Amount = Principal + Simple interest = Rs. 1000 + Rs. 100 = Rs. 1100

Example 2

1. Find the simple interest on Rs. 1000 at 5% per annum for 2 years.

| Time (years) | Principal (Rs.) | Simple Interest (Rs.) |
|--------------|-----------------|-----------------------|
| 1            | 1000            | 50                    |
| 2            | 1000            | 100                   |
| 3            | 1000            | 150                   |
| 4            | 1000            | 200                   |

Find the simple interest on Rs. 1000 at 5% per annum for 2 years.

- (i) Simple interest =  $\frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$

$$= \frac{1000 \times 5 \times 2}{100}$$

- (ii) Simple interest =  $\frac{\text{Principal} \times \text{Rate} \times \text{Time}}{100}$

$$= \frac{1000 \times 5 \times 2}{100}$$

(iii)  $s; /l \text{ lgsfNg} \rangle$

$$- j:t\text{sf}]Psf0 \text{ dNo} \times j:t\text{sf}];^aVof$$

| $l;=g$ | $Psf0 \text{ dNo}$ | $j:t\text{sf}];^aVof$ | $hDdf \text{ dNo}$         |
|--------|--------------------|-----------------------|----------------------------|
| 1      | ?= 20              | 15                    | $20 \times 15 = 300$       |
| 2      | ?= 400             | 45                    | $400 \times 45 = 18000$    |
| 3      | ?= 15.50           | 24                    | $15.50 \times 24 = 372$    |
| 4      | ?= 250.50          | 64                    | $250.50 \times 64 = 16032$ |

2.  $Psf0 \text{ dNo lgsfn}$

| $l;=g+$ | $j:t\text{sf}];^aVof$ | $hDdf \text{ dNo}$ |
|---------|-----------------------|--------------------|
| 1       | 10                    | ?= 250             |
| 2       | 32                    | ?= 672             |
| 3       | 60                    | ?= 5460            |
| 4       | 234                   | ?= 250.50          |

(i)  $tf\text{lnsfdf } s]s]s/f \text{ lb}0Psf \text{ 5g} \rangle$

(ii)  $yfxf \text{ kfpkg}I s/f \text{ s} \rangle x] \rangle$

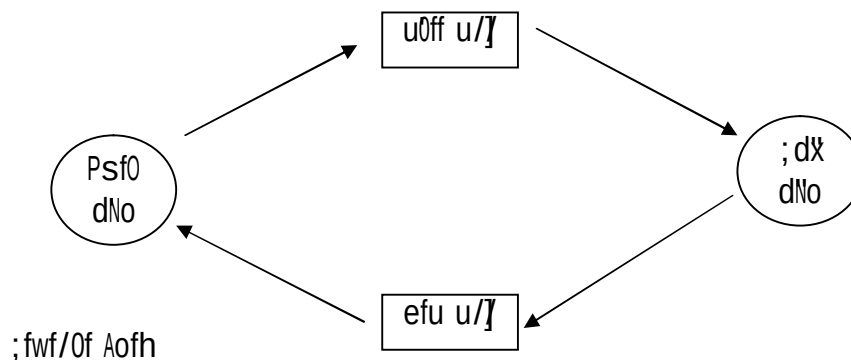
(iii)  $Psf0 \text{ dNo } -k\text{tcf}f \text{ } s; /l \text{ lgsfNg} \rangle$

(iv)  $Pp6f \text{ } j:t\text{sf}]dNo = \frac{\text{वस्तुहरूको जम्मा मूल्य}}{\text{वस्तुहरूको सङ्ख्या}}$

$$pbfx/0fsf \text{ nflu} = \frac{250}{10} = 25$$

$$[j:tx\text{sf}]hDdf \text{ dNo} = Pp6f \text{ } j:t\text{sf}]dNo \times j:tx\text{sf}];^aVof]$$

$gf\text{ } \parallel Ps\}k\text{pf}/sf \text{ Psf0 } dNo \text{ } yfxf \text{ ePdf } j:t\text{sf}]kl/df0fnt0\{Psf0 \text{ dNon}\}u0ff \text{ } u/ \text{ } hDdf \text{ sh}$   
 $dfg \text{ lgsflnG5 } eg] \text{ sh } dfgnf0\{j:t\text{sf}]kl/df0f \text{ } ;^aVofn\} \text{ efu } u/ \text{ } Pp6f \text{ Psf0sf}] \text{ dfg } kQf$   
 $nufpg]Ij\text{wnf0}\{P\}ss \text{ lgod } elgG5 \text{ .}$



3.      ?= 300 sf]15% sf b/n]Ps jif\$ slt Aofh xG5 <

oxf“

P]ss lgod kpf] u/] ;d:of ;dfwfg ug]pkfo u/f}

oxf“ 15% Aofhb/n]

$$1 \text{ jif\$]} ?= 100 \text{ sf]Aofh} = ?= 15$$

$$1 \text{ jif\$]} ?= 1 \text{ sf]Aofh} = ?= \frac{15}{100}$$

$$1 \text{ jif\$]} ?= 300 \text{ sf]Aofh} = ?= \frac{15}{100} \times 300 = ?= 45$$

5f\$S/ldf ubf{

$$1 \text{ jif\$]} ?= 100 \text{ sf]Aofh} = ?= 15$$

$$1 \text{ jif\$]} ?= 300 \text{ sf]Aofh} = ?= 15 \times 3$$

$$= ?= 45$$

4.      ?= 100 sf]1 jif\$]Aofh 2= 12 xG5 eg] ?= 600 sf]1 jif\$]Aofh slt xG5 <

oxf“

$$?= 100 \text{ sf]1 jif$]Aofh} = ?= 12$$

$$?= 1 \text{ sf]1 jif$]Aofh} = ?= \frac{12}{100}$$

$$?= 600 \text{ sf]1 jif$]Aofh} = ?= \frac{12}{100} \times 600 = ?= 72$$

5f\$S/ldf ubf{

$$1 \text{ jif\$]} ?= 100 \text{ sf]Aofh} = ?= 12$$

$$1 \text{ jif\$]} ?= 600 \text{ sf]Aofh} = ?= 12 \times 6$$

$$= ?= 72$$

d\of<sup>a</sup>sg

1. cEof; 14.2 sf lx;fa ug{nufpgxf}\.
2. cEof; 14.1 df ePsf yk cEof; u/fpgxf)\.
3. 10 c6f sfk\sf]dNo Ć 100 kb5 eg]Pp6f sfk\sf]dNo slt xfhf <
4. Pp6f sf]fdf 30 hgf ljBfy!\{c6fp5g\eg]5 c6f sf]fdf slt hgf ljBfy!\{c6fp5g\xfhf <

kf7 3G6L M (

kl/ro

sg}klg ;fdfg vl/b ul/;s}kl5 vl/bstf}k;n}af6 lsg}f ;a};fdfgsf];<sup>a</sup>vof tyf dNo;ixt  
pNn} ul/Psf] Ij j/Of /flvPsf] sfuhnfo{lan elg5 . o; kf7df dNo ;'rlsf cfwf/df 56,  
Eof6 / s/ ;dfj} gePsf ;fdfo lan agfpg] tyf ;fdfo 3/fo;l ah\$sf];'rgf lng]/ lbg]  
1fg tyf ;ksf]ljsf; u/fpg v}hPsf]5 .

p2fo

o; kf7sf]cGtodf IjBfy}x lgDglnlvt s'fx} ug{; lfd xg]5g\

1. dNo ;'rlsf cfwf/df 56, Eof6 tyf s/ ;dfj} gePsf ;fdfo lan agfpg .
2. ;fdfo 3/fo;l ah\$af6 ;'rgf lng / lbg .

z}fs ;fdu

lansf gdgfx}, dNo ;'rl, ah\$sf gdgfx} cflb .

lzlf0f];sf0 Ij}ofsfnk

1. IjBfy}xnf0{lansf gdgfx} Ij t/Of u/L lansf]c\oog ug{nuf0{lgDglnlvt k}gx}sf]pQ/  
lbg nufpgkf}\
  - (i) u}xssf]gfd / 7}ufgf s]xf}<
  - (ii) Ij j}f]fsf]gfd s]xf}<
  - (iii) vl/b ul/Psf ;fdfgx} s]s]/x}5g\<
  - (iv) hDdf slt }lkofsf];fdfg lsg}5g\<
2. tn lb0Psf]h:t}dNo ;'rl af\$6f 6ff;lbg]

| ;fdfgsf]<br>gfd | ;Gtnf | :ofp | rgf | cfn' | gf:kftL | s]fp | cfk |
|-----------------|-------|------|-----|------|---------|------|-----|
| dNo k}t<br>shL  | 40    | 70   | 60  | 30   | 35      | 70   | 80  |

dflysf] dNo ;'tLsf cfwf/df c~hgf, ;/h / sfhfhn] lgDgcg';f/sf ;fdgxč lsg5g\ eg] pglxč k]o5nf0{lbgl] lan l]pfsnfkdf 5nkñn ul/Psf] lansf cfwf/df lansf]gdgf agfpg nufpgxf]\\. lan agfpg]jlddf cfjZos ;xof]u ugxf]\\.

c~hgf]lsg5f]

;/hn]lsg5f]

sfhfhn]lsg5f]

|      |   |      |
|------|---|------|
| ;tñf | 2 | lsuf |
| rgf  | 1 | lsuf |
| cfñ' | 5 | lsuf |

|      |   |      |
|------|---|------|
| :ofp | 1 | lsuf |
| cfñ' | 4 | lsuf |
| s]fp | 2 | lsuf |

|         |   |      |
|---------|---|------|
| :ofp    | 4 | lsuf |
| cfk     | 2 | lsuf |
| gf:kftl | 1 | lsuf |

- l]Bfylxčnf0{kf7ok:tssf]ælan / ah5 k7 cll0og ug{nuf0{Toxf";f]wPsf k7gxčsf]hjfkñ lbgl nufpgxf]\\.
- ;fdg vl/b ubf5f lanxč ;a5ng u/L÷u/f0{ltgsf cfwf/df 5nkñn u/fpgxf]\\. / ;f]lcg';f/ lan agfpg]cEof; u/fpgxf]\\.
- kf7ok:tssf]cEof; 15 df ;f]wPsf k7gxčsf]hjfkñ lbgl nufpgxf]\\.
- l]Bfylxčdwo] 2/3 hgfnf0{ k;n] -ljj]f\_ / af5lnf0{ vl/bstf5f] eldsdf clego ug{nufpgxf]\\. o; kpf]hgsf nflu ;fdg vl/b ug{cfkñh] tof/ kf/5f]g7xč -sfuhdf n]v5f\_ kpf]u ug]. ljj] ul/g] ;fdgxčsf nflu slffsf]fdf ePsf ;-;fgf ;fdgxčsf] kpf]u ug;ls65 .
- l]Bfylxčnf0{tof/ kf/Psf]cfDbfgl tyf vr5f]ljj/Of -ah5\_x]l l]leGg ;'rgfxč lng] tyf lbgl]cEof; u/fpgxf]\\. o;sf nflu cd]fn] tof/ kf/5f]pgsf kl/jf/sf]lgDgcg';f/sf] ah5 slffsf]fdf k]tt ub]tn lbOPsf k7gxčsf]cfwf/df 5nkñn ug{nufpgxf]\\.

| cfDbfgl  |         | vr       |         |
|----------|---------|----------|---------|
| ;f]      | /sd ?=  | zlif5    | /sd ?=  |
| t/sf/L   | 8000/-  | vfgf     | 12000/- |
| bW       | 9000/-  | nuf sk8f | 4000/-  |
| v;l afv] | 7000/-  | lzlf     | 16000/- |
| sv/f     | 12000/- | cf]wL    | 2000/-  |
| cGo      | 5000/-  | ljjw     | 5000/-  |
| hDdf     | 41000/- | hDdf     | 39000/- |

### 5nkñnsf nflu gdgf k7gxč

- s\_ cd]fsf]kl/jf/sf]cfDbfgl / vr5w]sg a9l 5 <
- v\_ ;f]kl/jf/sf];a5cbf a9l / 36l cfDbfgl]sf];f] s]/x5 <
- u\_ ;a5cbf a9l sg zlif5df vr{ubf{/x5g\<
- 3\_ pSt kl/jf/sf]art slt /x5 <

8. IjBfyl{xnf0{pglx{sf]cf-cfÇgf]kl/jf/df klg o:t}ah} agfpg]ul/Psf]5 < ltdlnf0{yxf  
5 < eGg]kZg ubI cf-cfÇgf]cleefjs;ü kfl/jfl/s ah}sf af/}f ;f}vk5 ug{nufpgxf}\.
9. kf7bk'tsdf lbOPsf ah};DaGwL ;d:ofx{ ;dfwfg ug{nufpgxf}\.

dNof<sup>a</sup>sg

IjBfyl{xsf]dNof<sup>a</sup>sg lzlf0f l;sf0 Ij}ofsfnkdf ;xeflutf / ;nUgttsf]cfwf/df ug{x}f}\.



kf7 3G6L M (

kl/ro

;rgfxčnf0{ul0ftlo cfwf/df ul/Psf];<sup>a</sup>sng tYof<sup>a</sup>s xfl. o;/L ;<sup>a</sup>sInt tYof<sup>a</sup>ssf af/ŋf cWoog ugIul0ftsfljwfl tYof<sup>a</sup>szf:q xfl. o; kf7df lb0Psf] tYof<sup>a</sup>saf6 ;Defljt ;rgfxč lng]/ lbg] lb0Psf tYof<sup>a</sup>ssf cfwf/df af/ ufk lvRg]tyf jldhfŋf ;<sup>a</sup>Vof kpfu u/L sg}:yfg / lJGbf0{hgfpq]cEof; u/fpg]tl/sfxčsf af/ŋf rrf{ul/gŋ .

p2ŋo

o; kf7sf]cGtodf lJBfylč lgDglnlvt s/fxč ug{; lfd xg]5g\

1. tflnsfdf lb0Psf]tYof<sup>a</sup>saf6 cfjZos ;rgfxč lng / lbg .
2. lb0Psf];fdfGo tYof<sup>a</sup>s -;rgf\_nf0{af/ ufkldf kltt ug{.
3. jldhfŋf ;<sup>a</sup>Vof kpfu u/L sg}:yfgdf c<sup>a</sup>sg ug{-klxnf]r tyfēdf .

zŋfs ;fduŋ

tflnsfdf ;<sup>a</sup>sInt tYof<sup>a</sup>s, ufk kŋ/, tof/ kfl/Psf]af/ufk cflb .

lzlf0fl;sf0 lJl0fsnfk

1. kf7bk'tssfl]tYof<sup>a</sup>szf:q kf7df kl/ro v08 cWoog ug{nuf0{Toxf"lb0Psf kŋgxč kfn]kfn] lJBfylčnf0{;ŋvl pQ/ eGg nufpgxf]\.
2. :yfglo ahf/af6 bŋgs pkef]usf ;fdgxc]sf] dNo;'rl ;<sup>a</sup>sng ug{nuf0{ tn lb0Ph:tf kŋgxčsf cfwf/df 5nkln u/fpgxf]\
  - i. ;aeGbf ;:tf];fdg s]/xŋ <
  - ii. ;aeGbf dxŋf];fdg s]/xŋ <
  - iii. xfdlnf0{x/ŋ lbg s]s:tf ;fdgxc rflxG5g\< cflb .
3. cfkŋh] tof/ kf/L nuŋfl]af/ufk slffsf]fdf kltt ugxf]\. ;ŋ;ŋ}o:tf]af/ufk]sf af/ŋf s] slt aeŋŋf÷;Deŋŋf 5f]< eGg] kŋg ubI slff tlg / slff rf/df cWoog u/ŋf]af/ufk]sf kŋM:d/Of ug{nufpgxf]\. cfjZos k/ŋf kŋ/fjnfŋg klg ug{nufpgxf]\.

4. ljbflx{znf0{o:t}u/l af/ufk agfpg ;S5f}< egl kZg ugxf\ . pglxznf0{cfGgf]ljbfnosf] slff !-% sf ljbflx{;^vofnf0{:tDe lrqdf b]vfpf ;lsG5 . :tDe n]vflrq agfpg l;sfpg] jlddf lgdgcg';f/ ugxf\ \

- slff !-% sf]slffut ljbflx{;^vof afBdf n]vlbg].
- k]1fg÷wf/0ffnf0{pkof] ub]af/ufk]sf]:s]h cgdfg ug{nufpg].
- ufk k]/df ljbflx{;^vofnf0{vofn u/l af/ufk lvRg nufpg].
- af/ufk]df :tDeaf/sf]rfBf0 a/fa/ kfg].
- af/ufk lvRg]cEof; 3/4 c]f tYof^saf6 agfpg nuf0{u/fpg].

5. ljbflx{znf0{ cfkV';L tYof^sxZ ;^sng u/l To:tf] tYof^snf0{ af/ufk]df k]tt ug{nufpgxf]\ . h:t} c]k]gf ldNg];fyLxZsf]xkl/jf/sf];b:o ;^vofE .

6. kf7bk:tssf]kh 113 df lbOPsf]af/ufk kf7 cWoog ug{nufpgxf]\ . kf7bk:tssf]cEof; 16.2 df lbOPsf ;d:ofxZ -;^rgfxZ\_ sf]af/ufk agfpg]cEof; ug{nufpgxf]\ . cfjZostf adf]hd ljbflx{znf0{;xof] klg ugxf\ \.

7. ljbflx{znf0{af/ufk lvRg]yk cEof;sf]cfjZostf dx;^; ePdf lzlfnsn]g}tYof^sxZ lbP/ af/ufk lvRg nufpg ;lsG5 .

h:t} ;/zn]slff 5 sf]cw]flif\$ k/Llffdf k]kt u/]f]k]ktfaS o; k]f/ 5 \

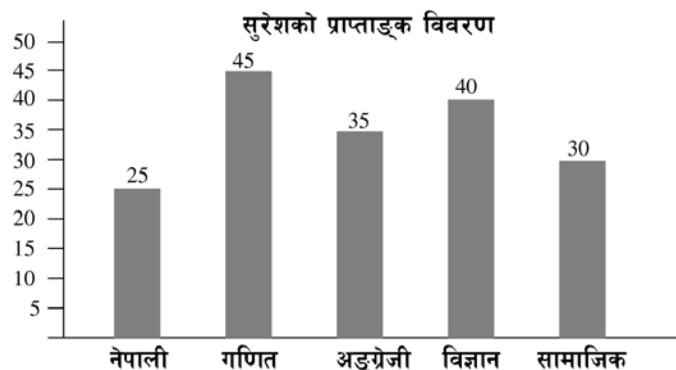
gkfnldf 25, ul0tdf 45, c^vhl]df 35, lj1fgdf 40 / ;fdflhsdf 30

tflnsf

|                    |       |       |       |       |         |
|--------------------|-------|-------|-------|-------|---------|
| ljifoxZ<br>k]ktfaS | gkfnl | ul0ft | c^vhl | lj1fg | ;fdflhs |
|                    | 25    | 45    | 35    | 40    | 30      |

o;/L tYof^S -;^rgf\_ nf0{ tflnsdf k]tt ubf{ ;^rgf lng tyf lbg ;lhnf] xG5 egl atf0lbgxf]\ .

dflysf]tflnsdf lbOPsf]tYof^snf0{tn lbOPcg';f/ af/ufk agfpg nufpgxf]\ \



af/u{kn}sf cfwf/df ljleGg kZgxč ub{5nkn}n ug{x}f\ . h:t}lj1fg / ul0ftdf slt kn/s  
eP5 <

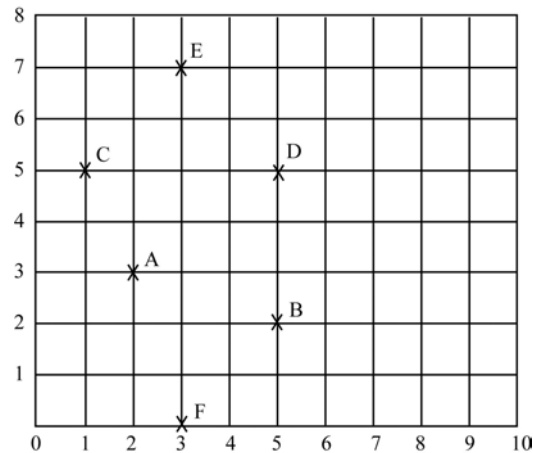
j|dhfBf ;<sup>a</sup>Vof

8. lgDgcg';f/sf]tflnsf afBdf nVg]

| JolSt | ; <sup>a</sup> s] | j:t   | ; <sup>a</sup> s] |
|-------|-------------------|-------|-------------------|
| /dž   | 1                 | lstfa | A                 |
| 8f]df | 2                 | sfkl  | B                 |
| kšfz  | 3                 | snd   | C                 |

JolStnf0{;<sup>a</sup>Vof 1,2,3 n]/ j:thf0{clf/ A, B, C n]hgf0Psf]5 eg] aefpg]. (1,B) n]  
/džsf]sfkl hgfp5 eg](1,A), (1,C), (2,A), (2,B), (2,C), (3,A),(3,B) / (3,C) n]s]s]  
hgfp5 < ljBfylčnf0{kfn}kfnf]kZgxč ub{jj|dhfBf ;<sup>a</sup>Vofsf]wf/0ff :ki6 kfl/lbgxf] \.

9. lgDgcg';f/sf] ju{fst sfuh -ufk k/\_ df tn bVf0Ph:t}ljleGg :yfgxčdf clf/ nV]  
bVfpgxf] \



- A :yfg hgfp5 -2,3) n]vG5 cyf{ A(2,3) xG5 eg]afSl clf/xč hgfp5]lgbZfa's  
-j|dhfBf\_ xč nVg]cEof; u/fpgxf] \ . of] ;dodf ljBfylčnf0{kfn}kfnf]6]andf g}uP/  
tyf afBdf ug{nufP/ ;xofu ug{x}f\ .
- ljBfylčnf0{o:t}cč ;d:ofxč agfP/ j|dhfBf ;<sup>a</sup>Vofxč eg]cEof; ug{nufpgxf] \.

lgbZfa's -j|dhfBf\_ nVbf hlxn]klg klxf t]f hfgk5{clg dfq dflylt/ nfluGk5{.

10. ljBfylčnf0{kf7ok'tsdf lb0Psf]j|dhfBf ;<sup>a</sup>Vof / lgbZfa's eGg]kf7 cWooog ug{nufpgxf] \  
/ Toxf''lb0Psf o;;DaGwL ;d:ofxčsf] ;dfwfg nVg nufpgxf] \.

dNof<sup>a</sup>sg

ljBfylčsf]slfddf ;xeflutf, slffsf0sf]cjnf]sg tyf lgk0ftsf cfwf/df dNof<sup>a</sup>sg ug{x}f\.

kf7 3G6L M (

kl/ro

o; kf7df lraqaf6 lb0Psf ;dX ;<sup>a</sup>s] (set notation) kpfl ePsf ;dXnf0{jfSodf nVg] c<sup>a</sup>s  
tyf clf/df kpfl ePsf ;dX ;<sup>a</sup>s]nf0{jfSodf nVg] / ;dXnf0{c<sup>a</sup>u]hl 7hf] clf/ (capital  
letter) sf]kpfl ug]1fg tyf ;lksf]ljsf; u/fpg vf]hPsf]5 .

p2fo

o; kf7sf]cG7odf ljbFylx<sub>2</sub> lgDglnlvt s'fx<sub>2</sub> ug{; lfd xg]5g\

1. lb0Psf];dXsf];dX ;<sup>a</sup>s] (set notation) agf0{jfSodf nVg] .
2. ;dXnf0{;rls/of ug{.

zHfs ;fdu|

;dX hgfpj]rf6x<sub>2</sub> ;dX ;<sup>a</sup>s] agf0{jfSodf n]vPsf]tflnsf, lraqfids<sub>2</sub>kdf tof/ kfl/Psf  
;dXx<sub>2</sub> cflb .

lzlf0fl;sf0 ljlpsnfk

1. ljbFylx<sub>2</sub>nf0{ cl3Nnf slffx<sub>2</sub>df cWooog ul/Psf ;dXsf wf/0ffx<sub>2</sub>nf0{ kg/fjnf]sg ug{  
nufpgxf] \. kg/fjnf]sg u/fpbf o; eGbf cufl8sf slffdf 5nkln ePsf ;dX; DaGwl cfwf/e<sup>t</sup>  
wf/0ffx<sub>2</sub> kg/fjnf]sg ug{; xof]l ugxf] \.
2. kf7bk:tssf];dX kf7 cWooog ug{nufpgxf] \.
3. SCHOOL, COLLEGE, POKHARA zAbdf ePsf clf/x<sub>2</sub>sf];dXnf0{;rls/of ljlwaf6  
nVg nufpgxf] \ h:t} S = {S, C, H, O, L}, C = {C, O, L, E, G}, P = {P, O, K, H, A, R}  
ljbFylx<sub>2</sub>nf0{o:t}cEof; k<sub>2</sub>:t ug{nufpgxf] \.
4. ;dXnf0{c<sup>a</sup>u]hl 7hf] clf/ (capital letter) n]hgfpj]cEof; ul/; s<sub>2</sub>k]5 ;dX ;<sup>a</sup>s] (set  
notation) leq ePsf ;b:ox<sub>2</sub> k9g nufpgxf] \. ltgsf u0fx<sub>2</sub> lrGg nufpgxf] \ / tl ;b:ox<sub>2</sub>  
sg sg ;dXdf kb5g\5nkln ug{nuf0{ki6 kfl/lbgxf] \.
5. ljbFylx<sub>2</sub>nf0{jfSodf lb0Psf ;dXx<sub>2</sub>nf0{;rls/of ljlwdf nVg nufpgxf] \ h:t}
  - gkfnsf k<sup>r</sup>r ljsf; lf]sf];dX  
R = {k<sup>r</sup>]f<sup>r</sup>rn, dWodf~rn, klZrdf~rn, dWoklZrdf~rn, ;b/ klZrdf~rn}
  - b; eGbf ;fgf hf] ;<sup>a</sup>vofx<sub>2</sub>sf];dX  
E = {2, 4, 6, 8}



kl/ro

o; kf7df alhlo cleJo~hsf]kl/ro, alhlo cleJo~hsf dfg, rf/ ;fwf/Of lgod / Ps rnoSt  
;dls/Ofsf]lgdf tyf xn ug{tl/sfxsf af/ 5nk n ul/g]5 .

p27o

o; kf7sf]cGtodf ljblyf lgDglnlvt s'fx ug{; lfd xg]5g\

1. b0kblo cleJo~hssf rf/ ;fwf/Of ljblyf ;d:of ;dfwfg ug{.
2. a/fa/L tYo; DaGWL wf/Off kkt ug{.
3. Ps rnoSt ;dls/Of; DaGWL ;dls/Ofsf]cjwf/Off agfpg .
4. Ps rnoSt ;dls/Ofsf]h / 36fpsf ;d:of ;dfwfg ug{.
5. Ps rnoSt ;dls/Of; DaGWL ;/n Jofjxfl/s zflAbs ;d:of xn ug{.

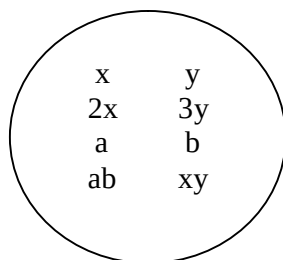
zHfs ;fdu

ljleGg kbx -alhlo, cleJo~hs -gdgfsf zkd t/fh, rssf]a66f 2 ctf, 10 ctf p:t}  
gfk ePsf lsnfx .

kf7 18.1 j.lhlo cleJo~hs / Itglxsf]dfg

lzlf0fl;sf0 ljblyfnsfk

1. alhlo cleJo~hs / Itglxsf]dfg

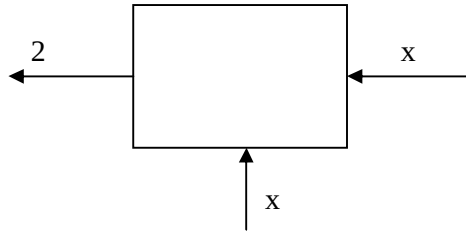


- (i) dflysf]tlfnsfdf slt ctf kbx 5g\<
- (ii) dfly lb0Psf]tlfnsfdf kbx slt ctf clf/ kbf ePsf]5 <
- (iii) b0cf rnx ldl;Psf kbx slt ctf 5g\<

gfb M

1.  $x, y, a, b, ab, xy$  cflbnf0{alhlo kb elgG5 . kbxZdf a, b, x, y .... h:tf ;<sup>a</sup>s} 0Toflb kpfj ul/G5 . o:tf]x, y .... ;<sup>a</sup>s}nf0{rn elgG5 .
2. b0{cyjf b0Gbf a9L alhlo kbxZsf alrdf rf/ ;fwf/Of ljlOf hgfpG]lrxGxZ (+, -,  $\times$ ,  $\div$ ) ;dfjjZ ePsf ul0ftlo jfSoxZnf0{alhlo cleJo~hs (Algebraic expression) elgG5 .

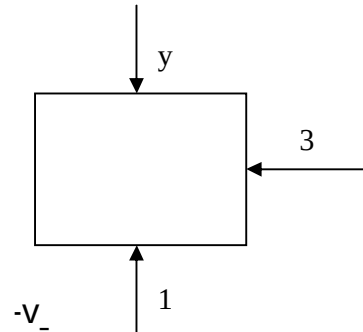
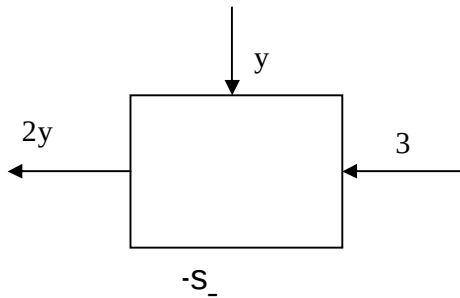
2. ljblykZnf0{tn lbOPcg';f/ ug{nufpgxf} \. cfjZostfcg';f/ ;xofj klg ugxf} \.



dflysf]aS;df aS;leq hfg]  $\rightarrow n] + /$  aS;af6 aflx/ hfg]  $\rightarrow n] -$  lrxG hgfp5 . dfllysf] lrqnf0{ul0ftlo efiiddf nlybf,

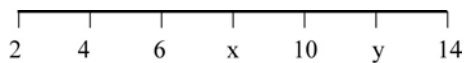
$$x + x - 2$$

or,  $2x - 2$



dfly -s\_ / -v\_ df lbOPsf lrqcg';f/ lrqsf rnnf0{ul0ftlo efiiddf nlyg nufpgxf} \.

- 3.



;<sup>a</sup>vof /yfdf x / y sf]dfg kQf nufpgxf} \.

4.  $\frac{1}{f(dn)} \frac{1}{c(gf)} \frac{1}{e(hf)} \frac{1}{s(x)} ; \frac{1}{G(tn)} / \frac{1}{s(x)} : \frac{1}{ofp} / \frac{1}{fv} \frac{1}{sf} / \frac{1}{x} \frac{1}{5g} \frac{1}{eg} \frac{1}{o} ; \frac{1}{nf0} \{ \frac{1}{ul0ft} \frac{1}{lo} \} \frac{1}{jfsodf} \frac{1}{s} ; / \frac{1}{n} \frac{1}{v} \frac{1}{5} < x + y$

5.  $\frac{1}{b} \frac{1}{x} \frac{1}{fosf} \frac{1}{egf} \frac{1}{0} \frac{1}{nf0} \{ \frac{1}{cle} \frac{1}{Jo} \sim \frac{1}{hssf} \frac{1}{\angle} \frac{1}{kdf} \frac{1}{JoSt} \frac{1}{ug} \frac{1}{x} \frac{1}{f} \} \frac{1}{\backslash \mathbb{M}}$

a)  $x / 3 \frac{1}{sf} \frac{1}{of} \frac{1}{uk} \frac{1}{n}$

b)  $16 \frac{1}{nf0} \{ \frac{1}{-----} \frac{1}{n} \} \frac{1}{efu} \frac{1}{ubf} \{ \frac{1}{cfpg} \} \frac{1}{efuk} \frac{1}{n}$

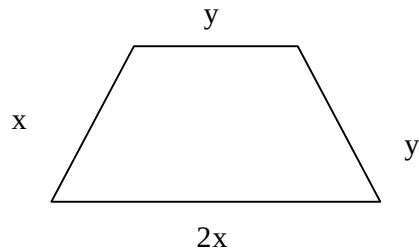
c)  $p / q \frac{1}{sf} \frac{1}{hf} \frac{1}{\beta} \frac{1}{k} \frac{1}{nsf} \frac{1}{2} \frac{1}{u0ff}$

d)  $\frac{1}{Pp6f} \frac{1}{e(hf)} \frac{1}{s(x)} : \frac{1}{ofp} , \frac{1}{s(x)} ; \frac{1}{G(tn)} / \frac{1}{s(x)} \frac{1}{sf} / \frac{1}{x} \frac{1}{\beta} \frac{1}{5g} \frac{1}{\backslash}$

e)  $a \frac{1}{sf} \frac{1}{2} \frac{1}{u0ff} / b \frac{1}{sf} \frac{1}{36f} \frac{1}{psf} \frac{1}{c} \frac{1}{Gt} /$

6.  $\frac{1}{kf70k} \frac{1}{tssf} \frac{1}{kh} \frac{1}{124} \frac{1}{df} \frac{1}{lb0Psf} \frac{1}{cEof} ; \frac{1}{18.1} \frac{1}{df} \frac{1}{lb0Psf} ; \frac{1}{d:ofx} \frac{1}{\angle} \frac{1}{j} \frac{1}{ldz} \frac{1}{\mathbb{M}} ; \frac{1}{dfwfg} \frac{1}{ug} \{ \frac{1}{nufpgxf} \} \frac{1}{\backslash} \frac{1}{h:t} \frac{1}{j} \frac{1}{\mathbb{M}}$

-S\_

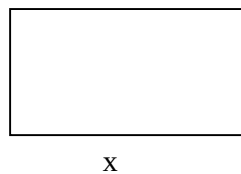


–  $\frac{1}{IjBfyl} \frac{1}{nf0} \{ \frac{1}{kl} / \frac{1}{ldlt} \frac{1}{eg} \frac{1}{\beta} \frac{1}{s} \} \frac{1}{xf} \frac{1}{egl} \frac{1}{cjwf} / \frac{1}{0ff} \frac{1}{kg} / \frac{1}{fj} \frac{1}{nf} \frac{1}{\beta} \frac{1}{g} \frac{1}{u/L} \frac{1}{of} ; \frac{1}{d:of} ; \frac{1}{dfwfg} \frac{1}{u/fpgxf} \frac{1}{\backslash}$

–  $\frac{1}{hDdf} \frac{1}{ehfx} \frac{1}{\angle} \frac{1}{sf} \frac{1}{hf} \frac{1}{\beta} = x + y + y + 2x$

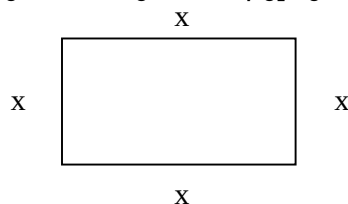
$\frac{1}{cyjf} , \frac{1}{lb0Psf} \frac{1}{lrqsf} \frac{1}{kl} / \frac{1}{ldlt} = 3x + 2y \frac{1}{x} \frac{1}{5} .$

-V\_



$\frac{1}{dfly} \frac{1}{lb0Psf} \frac{1}{ju} \frac{1}{\beta} \frac{1}{f} \frac{1}{kl} / \frac{1}{ldlt} \frac{1}{slt} \frac{1}{xf} \frac{1}{hf} <$

ca,  $\frac{1}{Pp6f} \frac{1}{ehfsf} \frac{1}{dfg} \frac{1}{lb0Psf} \frac{1}{5} . \frac{1}{c} \frac{1}{\angle} \frac{1}{ehfx} \frac{1}{\angle} \frac{1}{sf} \frac{1}{dfg} \frac{1}{slt} \frac{1}{xf} \frac{1}{hf} < \frac{1}{IjBfyl} \frac{1}{\angle} \frac{1}{nf0} \{ \frac{1}{cgdfg} \frac{1}{ug} \{ \frac{1}{nufpgxf} \} \frac{1}{\backslash} . \frac{1}{IjBfyl} \frac{1}{\{ \frac{1}{u} \frac{1}{5nk} \frac{1}{inkl5} \frac{1}{lrqsf} \frac{1}{cfsf} / \frac{1}{ju} \frac{1}{\beta} \frac{1}{sf} / \frac{1}{ePsfn} \} ; \frac{1}{a} \} \frac{1}{ehfsf} \frac{1}{dfg} \frac{1}{x} \frac{1}{x} \frac{1}{5} \frac{1}{egl} \frac{1}{v} \frac{1}{xf} \frac{1}{kfp} \frac{1}{g} \frac{1}{5g} \frac{1}{\backslash} . \frac{1}{To} ; \frac{1}{f} \frac{1}{eP} \frac{1}{pSt} \frac{1}{ju} \frac{1}{\beta} \frac{1}{sf} / \frac{1}{lrqsf} \frac{1}{kl} / \frac{1}{ldlt} \frac{1}{slt} \frac{1}{xf} \frac{1}{hf} <$





$$r/f/ \text{cf} \text{ ehfsf} / \text{of} \text{ uk} \text{ n} = x + x + x + x = 4x$$

7. kf7bk:tsdf ePsf] ;d:of kh g#124 sf]6 -s\_ df ePsf] zflAbs ;d:ofnf0{cleJo~hsdf n]vg nufpgxf] \.

lj sf; ;ü x :ofp lyP . p; n] cç b0cf a9l :ofp lsGof]. ca pñ;ü slt ccf :ofp 5g\<

$$lj sf; n] lsgb] :ofp = x$$

$$p; n] lsgb] yk :ofp = 2$$

$$pñ;ü ePsf] hDdf :ofp = x + 2$$

8. tn lb0Psf] cleJo~hsdf  $x = 2$  /fvbf cleJo~hssf] dfg slt xG5 <

$$(i) \quad 3x = 3 \times 2 = 6$$

$$(ii) \quad 3 + x = 3 + 2 = 5$$

$$(iii) \quad 2x \div 4 = 2 \times 2 \div 4 = 4 \div 4 = 1$$

$$(iv) \quad \frac{12x+4x}{2x} = \frac{16x}{2x} = \frac{16 \times 2}{2 \times 2} = \frac{32}{4} = 8$$

$$\text{csf]tl/sf, } \frac{12x+4x}{2x} = \frac{12 \times 2 + 4 \times 2}{2 \times 2} = \frac{24+8}{4} = \frac{32}{4} = 8$$

dNof<sup>a</sup>sg

lj Bfyl{dNof<sup>a</sup>sg sfo{lzlf0fl;sf0 lj]ofsnfk ;ü;ü}ug{plrt xG5 . cleJo~hs;ü ;DalGwt bxfosf ;d:of lj Bfyl{nf0{;f]lg ;lsG5 ||

- 3 df slt hfßbf ofukn 7 xG5 < 0;nf0{ul0ftlo jfSodf n]vgxf] \.
- Pp6f jufsf/ lrgsf]nDaf0 y cm 5 eg]pSt jufsf/ lrgsf]kl/ldlt slt xfhf <
- Pp6f çvdf 200 r/fxç lyP, çvdf cç y ccf r/fxç cfp/ a;]. ca çvdf hDdf slt r/fxç eP <
- olb  $x = 2$  eP  $3x + 2$  sf]dfg slt xfhf <
- olb  $x = 1$ ,  $b = 3$ ,  $c = 5$  eP  $10a + 10b + 10c$  sf]dfg slt xfhf <

**18.2** alhlo cleJo~hsx<sub>2</sub>sf]hf<sub>3</sub> / 36fp

lzlf0fl;sf0 lj|ofsnfk

1.

$$4 + 2 = ?$$

$$4 + ? = 6$$

$$x + 2 = ?$$

$$x + ? = 2x$$

$$x + ? = x + y$$

dflysf ;d:ofx<sub>2</sub>nf0{sfnf]kf6ldf n]vl vfnl 7fpdf s] /fv' knf{< s;/l yxf kfpg}< 5nk<sub>in</sub> ugxf]\.

sfnf]kf6ldf lgDg clwJo~hs /fvl 5nk<sub>in</sub> ugxf]\.

2.  $3x + 4x + 5x$

lb0Psf]cleJo~hsdf s:tf kbx<sub>2</sub> 5g\< -; hftlo kbx<sub>2</sub>

cleJo~hdf sg lj|of ug]egsf]5 < -hf<sub>3</sub> lj|of

klxnf]c<sup>a</sup>s dfq hf<sub>3</sub>bf,  $(3 + 4 + 5)x = 12x$

3.  $7x + 9y$  af6  $3x + 4y$  36fpbf slt af<sup>s</sup>l /xG5 <

lb0Psf cleJo~hsaf6 rnx<sub>2</sub> kQf nufpgxf]\.

sltc<sub>3</sub>bf rn 5g\< (2)

sg sg rn 5g\<  $(x / y)$

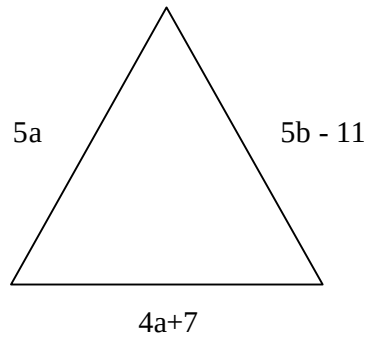
$$7x + 9y$$

$$3x + 4y \quad [ \text{lsg lrx<sub>2</sub>g abn} ] 5nk_{in} \text{ ugxf] \.}$$

$$\frac{-}{-}$$

$$4x + 5y$$

4.



olb  $a = 2\text{cm}$  /  $b = 9\text{cm}$  eP dflýsf]lqehsf]kl/lđlt slt xfhf <

dflýsf]lrqdf s]s]lb0Psf]5 < ehfxčsf]dfg lbPsf]5 .

kQf nufpg kg[s/f s]xf< lqehsf]kl/lđlt

lqehsf]kl/lđlt s;/l yxf kfpg ;ls5 < ;a}ehfxčsf]hfß u/]

$$;a}ehfxčsf]ofjkn = 5a + 4a + 7 + 5b - 11$$

$$= 9a + 5b - 4$$

ca  $a$  /  $b$  sf]dfg kl:t:yfkg ubf{

$$9 \times 2 + 5 \times 9 - 4 = 18 + 45 - 4 = 63 - 4 = 59\text{cm}$$

5.  $7a + 7b + c$  agfpg  $2a + 7b + 4c$  df slt hfßknf{<

dflýsf];d:ofnf0{b}focg';f/ klg n]g ;ls5 M

$$2a + 7b + 4c + ? = 7a + 7b + c$$

ca vfnl 7fpñf0{ x dfcuf

$$x = (7a + 7b + c) - (2a + 7b + 4c)$$

$$= 7a + 7b + c - 2a - 7b - 4c$$

$$= 5a - 3c$$

ctM  $2a + 7b + 4c$  df  $5a - 3c$  hfßkf  $7a + 7b + c$  agfpg ;ls5 .

dNof<sup>a</sup>sg

- $2y + 3y = ?$
- $a + b + a + c = ?$
- $7m + 2m + 3p = ?$
- $12x - 16y + 2z + 2x + 8y - z = ?$
- $3x - 6y + 2x - 4y + 3z = ?$
- $3a + 4b + 5c + a + b + c = ?$

kf7 18.3 ; dLS/Of

lzlf0fl;sf0 lj|ofsnfk

1.  $s_j$ ;  $a_{\text{Vofdf } 5 \text{ hf} \text{bf To; sf]of]ukn } 7 \text{ x} \text{5 eg]To]}; a_{\text{Vof slt xhf}} <$   
 $oxf;$   $k_{\text{Zgdf s]s]lbPsf]5, yxf kfpgkg]}; a_{\text{Vof slt xhf}} < s; /L \text{ yxf kfpg}] <$   
 $dfgf}; f]; a_{\text{Vofnf0}\{x \text{ df} \text{bf}$

$$x + 5 = 7$$

or,  $x = 7 - 5$

or,  $x = 2$

2. ;dls/0fdf x sf]dfg kQf nufp .

$$2x = 4$$

or,  $x = 4/2$

or,  $x = 2$

3. ;dls/of xn ubf{a/fa/L tYosf]kpfu

bxfosf ; dls/0fd a/fa/L tYosf af/df 5nknn ugxf; \M

(i)  $x + 7 = 10$

or,  $x + 7 - 7 = 10 - 7$  -sg a/fa/ tYosf]kpfu u/ʃf]5

or,  $x = 3$

(ii)  $x - 5 = 12$

of ; dls/0fsf]xn ug{sg a/fa/l tYo kpf] ug{;lsG5 <

(iii)  $\frac{1}{2}m = 6$  df sg sg a/fa/l tYo kpf] ug{;lsG5 <

(iv)  $3y = 9$  o;df sg a/fa/l tYo kpf] ug{;lsG5 <

dflysf ;d:ofxg g=1 df h:t}xn u/l x, y, m sf]dfg lgsfNg nufpgxf] \.

4.  $2x + 3x = 15$  nf0{xn ugxf] \.

oxf"lb0Psf] ;dls/0fdf s:tf s:tf cleJo~hs 5g\kQf nufpg lbgxf] \. -ba}kb ;hftlo 5g\.

ca ;hftlo kb hf}bf,

$$2x + 3x = 15$$

or,  $5x = 15$

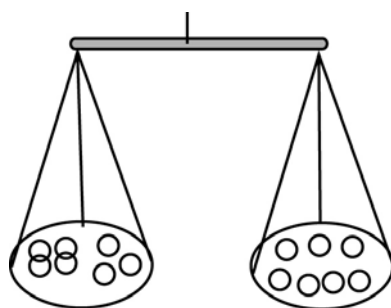
sg}a/fa/l tYo kpf] ug{;lsG5 . efu lsg < x sf]u0ffaS 5 ePsfN]

or,  $\frac{5x}{5} = \frac{15}{5}$

or  $x = 3$

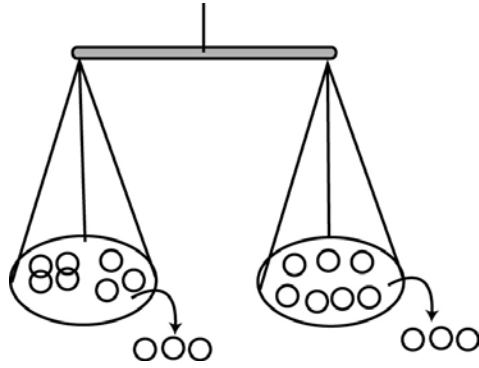
5. t/fhsf]kpf] u/l ;dls/0f xn u/ M

$$2x + 3 = 7$$



8 nf0{x dfgf}

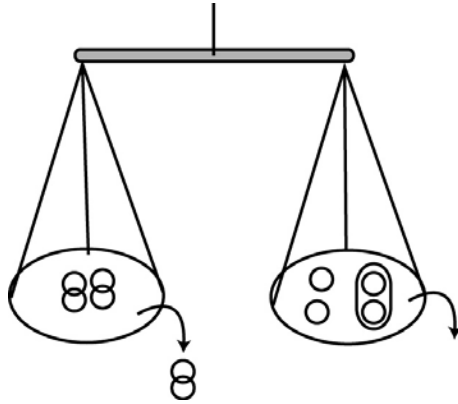
dfly t/fhdf lb0Psf] ;aS]nf0{ul0ftlo efiffdf nYbf  $2x + 3 = 7$



dfly lb0Psf] t/fhdf /x]sf]lrqnf0{ul0ftlo efiffdf n\bf,

$$2x + 3 - 3 = 7 - 3$$

$$\text{or, } 2x = 4$$



kn\ t/fhdf ePsfnf0{ul0ftlo efiffdf n\bf,

$$x = 2$$

Pp6f a66f = 2 c6f lsnf x65 .

**Ex 18.4** ; dls/0fsf]kbf]

lzlf0f];sf0 lj]ofsnfk

1. ;lgtfn]?= 5 vr{u/k5 p];ũ ?= 15000 af\$ /x05 eg]p];ũ slt ?lkof"/x5 <

oxf,"

;lgtfn]vr{?= 5 ul/g\.

;lgtf;ũ af\$ ?= 15 5 .

ca pgl;ũ h0df ?= slt lyof]xf]hf kQf nufpgxf];\.

dfgf];lgtf;ũ x ?= lyof].

ca kZgfg';f/ pgl]vr{u/5f]/ af\$ /x5f]?lkofhf0{;dls/0fdf n]bf,

$$x - 5 = 15 - \text{sg} \quad ?= 5 \text{ vr}\{u/5fn]$$

or,  $x - 5 + 5 = 15 + 5$  -a/fa/df a/fa/ kl/df0f hf]bf\_

or,  $x = 20$

cyjf, ;lgtf;ũ 20 ?lkof"lyof].

2. Pp6f ljBfnodf s]fsf];^Vof s]l.sf]e6bf 2 u0ff a9L 5 . ljBfnodf h0df 300 ljBfyl{/x5g\ eg]h0df s]l.sf];^Vof slt xf]hf <

oxf," s]f / s]l.sf];^Vof lb0Psf]5g] .

kZgfg';f/,

$$s]fsf];^Vof = 2x \text{ s]l.sf];^Vof}$$

$$\text{To;h] s]l.sf];^Vof} + s]fsf];^Vof$$

$$= \text{h0df ljBfyl}\{;^Vof$$

$$\text{cyjf, } 2 \text{ s]l.sf];^Vof} + s]fsf];^Vof = 3$$

$$3 \text{ s]l.sf];^Vof} = 300$$

$$\therefore \text{sf}[\text{sf}] ; ^a\text{Vof} = \frac{300}{3} = 100$$

dfjvs ħkdf sf[sf] ; ^aVof kQf nuf0{pQ/ hfRg nufpgxf] \. = 100 hgf .

3. Pp6f sfd Ps ltxf0 20 lbgdf ug{;ls65 eg]k/f sfd ug{slt lbg nfu5 <

dflysf]kZgnf0{lgDglnlvt ; ^aVof /yfdf b]ypg ;ls65 :

$$\begin{array}{ccc} 20 \text{ lbg} & 20 \text{ lbg} & 20 \text{ lbg} \\ 1/3 & 1/3 & 1/3 \end{array}$$

dflysf] ; ^aVof /yfaf6 1/3 efu sfd ug{20 lbg

2/3 efu sfd ug{20+20 lbg

3/3 efu sfd ug{20+20+20 =60 lbg

cyfħ, 1 efu sfd ug{60 lbg nfu5 .

csfħt/sf,

dfgħk/f sfd (1) ug{x lbg nfu5

$$\text{ct}\text{M Ps ltxf0} = \frac{1}{3} = ?$$

$$\text{kZgfg} ; f/, \frac{1}{3} x = 20$$

$$\text{ct}\text{M} \frac{3 \times x}{3} = 3 \times 20$$

$$\text{jf, } x = 60$$

jf k/f sfd ug{60 lbg nfu5 .

4. Pp6f n7Ųl 2x ld6/ / csfħn7Ųl x + 2 ld6/ nfdf 5g\ . bħ}n7Ųl hfBbf n7Ųlsf]nDaf0 17 ld6/ x65 kħoħ n7Ųl slt slt nfdf /xħg\<

oxf“

$$\frac{\begin{array}{ccc} & 17 \text{ ld6/} & \\ \hline 2x & & x+2 \end{array}}{}$$



دفعلي سفيان نيلسفون جفك اولفتلو عيفدفي نيلوف،

$$2x + x + 2 = 17$$

or,  $3x + 2 = 17$

or  $3x + 2 - 2 = 17 - 2$

or  $3x = 15$

or  $3x/3 = 15/3$

or  $x = 5$

كلخنف سفيان جفك =  $2x$  5,  $x = 5$  ع سفيان دافو =  $2 \times 5 = 10$  لد6/

بف سفيان جفك =  $x + 2$  5,  $x = 5$  ع سفيان دافو =  $5 + 2 = 7$  لد6/

دئوفا سغ

1. /fd;ü ePsf]k}fsf]b0{u0ffdf ع= 4 hfPbf pü;ü hDdf 20 ?lkof"x05 eg]/fd;ü slt ?lkof"/x5 <
2. Pp6f ;aVof / To;sf]cfwf ldnfpbf hDdf 30 x05 eg]Tof];aVof slt /x5 <