

# NÁHUATL

DECLARACIÓN DE PRINCIPIOS



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La dirigencia nacional presidida por la Dra. Claudia Ruiz Massieu, en el marco del día Internacional de la Lengua Materna, dedica esta traducción de la Declaración de Principios del Partido Revolucionario Institucional a nuestros estimados congéneres de los pueblos indígenas, como una forma de garantizar la salvaguarda del patrimonio cultural inmaterial de los Náhuatl, Maya y Tének.

La preservación de las lenguas maternas, se hará de manera progresiva, a fin de lograr preservar el mayor número de lenguas originarias, plasmadas en estos principios prácticos, que fundan la ideología del partido, con ello deseamos generar un marco de vida propicio a la plena expansión de los individuos y comunidades, gozando al derecho a expresarse en la lengua de su elección, la libertad de decidir, el acceso a la información y participar en la vida política de nuestro país.

El Partido Revolucionario Institucional, traduce sus aspiraciones a fin de dialogar con la sociedad bajo parámetros democráticos, creando un encuentro con todos los interlocutores, para que tengamos cabida, presencia y voz en los escenarios de elección y representación.

**Mtra. Bernarda Reyes Hernández**

Secretaria de Acción Indígena del CEN del PRI

## Toyukolmelawalistin

Titlamachtekitke, titlamachtlahtohke tikpalewihke, tiktsintinke yenkwik mexihkatlalle.

Tikixmate, yutoihkwatlalihke Mexihko, moixkwaltlolle wan, ipanpa otomammapehke, okimahchuitihke, okiekatihke weyeamachnemilismelawane 1917, tlin tichxayakakixtia timexikan.

Tochichikawallutihke, ma toikniwan makasikan tlimoneke, tikneke noch tlaka wan tlin tatanpowe ma kwalle ikatiyekan; nochipa tikihta tlakwalle otikchihke wan tlaun tichpolowa, wan ikakwalyutika tinemikan ka inun kwalle tikinmapalewiske toikniwan.

1.- Tehwan titlamachtekitke (PRI) tomatlakechia itech inemilis olintlakayutl (Rev. Mex.) tlin tich ilhwia noche tlin tich ilhwia itech iwaxkayutl mexihkatlalnante. Manemikam keh monemilismate matitlamach tsonkotunakan, ma ammo tochiko intakan. Inkinti tlamachtekitke moneke, mitikwepaltin matik weyelikan Mexihco, wan motoklasa itech inemilisan sepania tlakatsontekilistle ka okse yenkwik tlamachtekitke, kampa tikselia tlamachtsontekilistle.

2.- Timexihka tlamachtlahtowane tisawamehti tlakomeh itech titlamachtekite seke miltekitke okseke tlin momaihtowa wan oksetlaka yehwan tichamakitskintoke tlin tekiwia, tlin tich ilhwia tinochtin timexikatlacayutl. Yehwn lin kinpaktis totlauk tekitiske, tich palewia otichmapalewihke wan tepalewia; noche tlin yutiktekitke ipan mexihcatlalle yu tikin sentlalihke telpokameh ichpocamen, olin PRI-MXwan seolintlakayutl, yu tosasalutihke ipanin mexihkatlalle, yu tikin sesehtlalihke tlakameh, tikinta yu tiwepahke to weyilihke tlin titlamachtekitkeh PRI, yutiochihchikawalutihkeh.

3.- Tehwan ihtik tikate in Mexicatlatsontekilistle, tikneltoka weyeamachmelawalistle, tlamantle Mexihco. Tiktoka tlin ihkwilohtok ipan amameh wan ammo titekwamana, wan tikmawistilia.

4.- Tehwan titlamachtekitke ammo tikneke tlahtulpan tiyeske matik neltokakan tlin iwaxka sowameh.

5.- Tehwan titlakame tiktokilia totlamachtekitke, tiktokilia kakampa tiyaske wan keno titlatsontekiske; wan ammo toixpolowa; tikneke ma ammo tichkitskikan, ma ammo tichtlakwilikan melio, ma ammo tichpalewikan ma ammo tich tlahkwilulpalewikan, nuihke wehka altepemeh, tlakapalewistatahpuhke tlamachtlaka, wan tlamachtutupixkeh, nuihke tla ammo tikmate kakampa witspalewilistle tehwan titlamachtekitke yutitlanankilihke tlin kineke altepemeh, tikneltoka wan tomatlakechia ipan totlamachtekitl, noche kwalle mochiwas, tlatinochtin titekitiske kakwalyutika.

6.- Tikneke matinochtin titlahtukan noche tlin ipan totlalnan Mexihco, wan kwalle yutohkahke, sepania tikpalewiske to tlanan Mexihco. Tik mawistililia noche tlinmihtowa wan tlin ammo mihtowa, ka inun tikweyelia totlalnan. Tehwan

titlamachtekite sowameh wan tlakameh (PRI) tlasepania tiyaske tomatsatsa kwiliske, ahke kinekes topanpanus, wan tlatinochtin kihtusneke ammaka tichtatahpowis, noche ma kmalle mochiwanan toyeyampa. Tikneltokatla titlamachtitekite, wan okse tlakatlahtohke ti tekitiske sepania, tiknemilia noche tlin ipan tomatlakechia tlin melawak tekixexelulle wan ammo tiktokilistle san moneke motokatlalis wan tlatlanes, tikneke maixmatikan yenkwik tlamachtlaka, tikneke ma tonechikukan oksekeh tatahpuhke ka inun titekitiske itlakwk ahke tichtatapowia wan tinochtin kwalle tiyesken.

7.- Tehwan titlamachtekitke tikipalewia makineltokakan noche wan ihkiun kwalle tiyeske, onyesmedio, tlahtohke wan tlamatlistlakayutl tichtlahtulpalewia tlamelawelistlakayutl wan to mahmanas ke sepania tinehnemiske noch altepeme wan moch tlakayutl. Ammo tinochtin tihikatike, kematinochtin tomatsatsakwiliske ammaka tixelus wan to chikaktiliske tlatikneke tinochtin matomatsatsa kwilikan ahke kinekes topanpanus.

8.- Tehuan titlamachtekitke ikatotla sepania, sepantitekitiske ikaitech totlaltikpaktsin ammo ma tiksoyutikan ammo ma tikkokolismakakan totlal, ma tikimixutika yulkameh wan noche tlin tlakaka, tiktemuske tomi wan tlahtultekilakame, tikneltoka tlamach titekitiske, sepania tiktemuske melio wan tlakameh, tlin topan mochiwa wan tlin iteh mochiwa totlalnantsin.

9. Titlamachtekitke, ihkatik ka tiknemilia kenen okse tlaka tlin nuhke ipannemowa totoke, ammo titechikohita, tlamach titlatsonteke, tikinmawistilia sowameh wan tlakamen. Inkatik ika titekite ken (Internacional Socialista y de la Conferencia Permanente de Amércia Latina), wan intlakwitekite. Tlatitlamachtekitiske, tla titlamachyesque ipanin tlaltikpaktsintle ma tikchihchikawanalutikan tomexihkatlalan, ma totlamachtlalikan, ma titlatsontekikan tikmate amaka topanpanus ammaka tichnemilispatalas tikmate, tlin topan omochi miakxiwitl. Ma kimatikan aktehwan, ma totlakaihtakan ka inun ammo tomahmakaske, tlamach titekitiske wan sepania titlatsontekiske. Ma tik kanakan, ma tik ihtakan noche ma toixutihakan noche tlin yenkwil kistok ammo tiktsatsakwiliske ka inun to mamachiltiske, ka inun tonunutsaske ikim kwalle tiyeske ipanin tlaltikpaktsintle tiktlahita, tlamach tekutihke (O.M.T.) yehwan kitekiwia amatekixexelulle kene ika titekitiske.

10.- Tehwan ammo tichpactia titlamahmakwiske ammo tikneke matlamahmakwikan tla ammo kitsakwakan, tehwan noche titemachiltia, nochtlaka ma kimahmatikan, achto tlin tiseantikite. Ipan ti tlachia toinkniwan ammo tikinkwamakan ammo ma kwahkwalanikan, titetlakahihta, timawistilia tinochtin. Tlakameh tlin kintlalia tlin kintekimaka, tlin ipan tlachiaske to ihniwan tikinewalowa wan tikintlawalihta tla ammo kwalle kichiwaske iteke, ammo ma tlapinawilpa tichkawakan (PRI) tehuan ammetla tikixepachowa anke kinekes totlawk tekitikin ma kiilkawa tlin ammo kwalle inemilis, nochipa ma kiilnamike tlin tikpialtikan ma ammo kimowaxkate tlin tiktekimakake santopahpatlatoke.

11.- Tehwan ipan titlachia sowameh ammo tikinchikohita ma pahpaktakan wan ma wepawakan nan tochan Mexihko nuike talcone tlin ammo tochanichan tikin miixutia sowameh ipan to altepeh nuihke kwa wehkatlalle yatimeme. To nonutsuitlakw kaltlaekantin tlin ammo tochan ichan.

12.- Tehwan titlamachtikate tikmate ken tiktlamachtlalia toinkniwan okichtin wan sowameh ammo tikinchikoihta, ma wepawikan, ma kipiakan imelio, wan ma tlalsontekikan, ipan titlachiakan tosihtsiwan, to kultsitsiwan, wehwelihtike, telpokameh wan kwatlimoluchtike wan noch tlaka tlin ammaka ipan tlahtowa.

13.- Tehwan tikixmate totlahtulmelawaliswan, ammo tekwamana itech tomatlakechia wan ammo tikinpatla wan ka inuntin tlahtulmelawalistin tichchichikawalutia kwan tikixpehpena ahke tich tatapowis wan tich sentlalia, tlamach titlahtowa, inintin tichilnamiktia tonelhwayuwan wan tich ixkwalnextia, ti temachiltia wan ma mochiwa tomelawalis tlahtulhwan tlalnantatapowalistle.

14.- Totlahtulchikawa noche tlin yu tikihtolike.

- Tlamach titlatsonkotumaske ipan totlanan.
- Ma kiixutikan, ma kineltokakan noche tlin kipixtok totlanan.
- Titlatsontekikan wan ihkwa ma tiktlalikan toteotsitsiwan wan noch totlanan.
- Noch tlaka ma mochiwa nikan tochan ma yehwan tlin tichtatahpowia ma tlamachtlalsonkotunakan nikan Mexihko.
- Tinochtin ma tikchiwakan melawalistlakayutl.
- Ma tichtlamachpalewikan, ma tikinmawistilikan sowameh matikinpalewikan ma tikinmakaka intechmonekeh kwak mo pialtia ma inpan titlachiakan.
- Ma tikin makakan tlin intechmoneke noche, tlin ipan amatl omotlalle.
- Ma tikin noche tlin intechmoneke topilhwan, wan ma noche mochiwa tlin ipan amatl omotlalle.
- Ma kwalle tekitiwa nan tochan Mexihco.
- Ma tikin tekimakakan nochtla ma momachtikan ma ammo san kipewaltikan ma ki tlamikan tlin kine mo machtis .
- Ma mo chiwa noche tlin ipan amamelawalistle omotlalle, ma ki pia ikal, ma ammo kinpolo atsintle, kampa chantiwa ka pakilistle nemowa.
- Ma kwalle mochiwa tlamachtsontekilistle to tlalnan.
- Ma tikin mawistilikan to masewalikniwan.
- Nochtlaka kwak walewas kaknapantla Mexihko ma ammo kinchikoihtakan, ma ammo kintsatsakwilikan, tlamachtekitke PRI yu kihto kwalle tekites kwalle tatahpowes, wan kichiwas kamelahkakayut wa temawistilis kenen omotalle impan weye amachneltlalistle wan nochtlakatl, ma kineltilikan tlin kineke totlanan.

15.- Toaltepewan kichihchikawallutia tlin tatapowen nikan tochan, wan nuihkeye titlamachtla tsonkotuna, kwalle tiyeske, tlin tichtahpowe yehwan kineke topan tlachiaske ma tichtlakahitakan, tlachikaktak tatahpowe amaka kixomankawis totlanan, ma tichchiwaka tlin kihtowa tomelawalistla kayutl. Tla aka kipia tlahtlakulle ma tlaxtlawa ma tlamach titlatsontekikan. Tikihtowa wan itech

tomatlakechia itech amachneltlistle, tlin topan tlamachtlahtowa, ma ametla tichpano, ma topan tlahtukan wan ammo toihtlakukan ma tlame ichtekilistle wan ahke kipiatahtlakulle ma kitsakwakan ammetla tikixepachukan wan noche ma ti temachiltikan, tla aka kipia tlahtlakulle ma tlaxtlawa. Noche tlin yu tikwepahke wan tichkohkoltia nan tochach, yehwn ka tichmahpilhwa tehwan okwache yu tinenehke yu tikinixtlapohke tlin tatahpowe nan tochan; tlin achto yu tikihtoke yuyik ixnextihke wan tlin sa tepan ma tikehktlalikan.

16.- Tikihtowa ma tiktlalikan ihkwa teotsitsiwan ipan siglo XXI, wan okseka tlin mo chiwas, tlin mo neltokaske, Ipan inin siglo XXI tlin tatahpowe ihkwa tiktlalia teotlahtulle, tlin okse monekes mochiwas tlin kineltilia wan melawalistlakayutl ma kitsontekikan tlin tatahpowe.

17.- Tikselia tlin tatahpowis makichiwa tlamachtlatsontekilistle ma kichihchikawalute nochtlaka wan ihkiun kualle tiyeske wan tikanaske tlin tikneke, ma onye tomi, ma anye tlamatilistle, wan tipaktaske, kampa tichante.

18.- Tikihtlanilia ahke tatahpowe ma kixpolo sowachikohtilistle, makinmixute.

19.- Tikneltoka ahke tichtatahpowes ma kinneltokakan kene xexelihka, ma tlamach tekisikan wan okse tlamachtekitke ma kinpalewikan ahke tich ehkanas, tich tatahpowis nochtlakayutl.

20.- Tikselia ma tichtlakaihtakan ma kinkawakan ma kwalle tekisikan, ma kwalle, ma tatahpowikan wan noche ma kitemachiltikan tekittl ma kitokakan campa mo kawa melio ihkihiwiun kineltokaske ahke tlackana ipan to tlalnan tla tinochtin tich xehxelwis yehwatlun kichihchikawaltis tla sepan titekitiske tlin kintekimakake tinochtin toweyeliske ammo yetik tikmachiliske nan totlalnan.

21.- Tehwan titlaekanaske ma mo tominweyelikan toikniwan wan ammo iknupanukan, ma ammo tikmaihtukak tlin ammo okok tlakate. Tehwan titlamachtekitke (PRI) towepaweltia to Mexihko, kipiaskes melio wan ayik kinpolus, noch tlaka wan kwalle tiyeske nan toyeyampa tla okuache titekitiske aik poliwis tomi, ma kwalle tikin tlaxtlawikan tlakewaltin, tinochtin kwalle tiyeske tlin mo tekite kwalle mo namaka nuwian. Tikin palewiske weyekaltlamachtekitke wan tlin ammo weye; nuike tikinpalewiske miltekitke, yulkawepawihke, nuike tlin tekite weyetlalakupilmanke. Tla onyes pixkistle aik poliwes to tlakwalle tla topalewiske ika yenkwiktepostian ammo yetik tik machiliske tekittl.

22.- Tikinihtlanilia tlin tich tatahpowis ma noch tlaka tichpalewe, ma tinochtin ma tichmapalewikan ma ammo tich iknupanultikan ma tichxehxelwikan ma kimakakan ahke yutekit tinochtin ma tichmachtikan, tla tinochtin tomachtiske tlin yenkwik yukisako yewatlin tichweyilis, tichwepawaltis wan nochtlaka tichixtlapuske, wan tichsentlalis, tlanochtin tomachtiske oksetik ka tinemiske.

23.- Tikihtlanilia ahke tichtatapowis ma kiixute, ma kitekimaka, weyetlahtohke wan noch tlamantle kualle tiyeske ahke tichtatapowe ma nochipa ma kipalewikan toikniwan tlin iknupano.

24.- Tikintlane ake tlaekanas ma kinkake tlin miak tlaka kiihtlane wan nuike ma kimawistile sentlale tlin san tlapuktin kampa nochtlaka tlatsontekiske.

25.- Ipan ti tlahtowa tomexihka tlanan, to atsin, wan iyeyampa tepospatlane kampa to waxka. Ma tik ixutikan amanaltin, ma mo chipawa tsoatl wan ma tik ixutikan, atsintle tlin tike ma tikanakan ichikawalis, tunaltsintle, yeyekatl wan atsintle ka inun tinemiske.

26.- Tik kwaktlahtulmahchutia, totlalan ammo ma namaka wan nuike tlin kipixtok tlanan wan ipan aik monamaka.

27.- Tikihtlane weye tlahtoke ma kiixute kampa tineme. Tla to tlakaihtaske ipan tlatikpaksintle, sepania Mexihko wan okse altepemeh kualle tinemiske kwalle tlamachtitlatsontekiske, achto ma kin mawistilikan toikniwan, sowameh, tlakameh ma ammo kin chikoihtakan kwak okse altepemeh yan tlaewaluske wan yan tekitsiske.

28.- Tikimilhwia itekitl tatahpowilistle ma kit lama noche chikointilistle wan ma kineltokakan amachmelawelistle, ma kimawistilikan imelawalisaltepemeh, kalpultin wan masewaltlamantim tlim achto omotsintihke, kampa neme tlamtilistle wan masewaltlahtultin. Mo ihtlane ma mo chiwa melawaliswaxkayutl, tla aka kipia tlahtlakulle ma tlaxtlawa, ma kitsakwa kan wan tinochtin ka kwalyutika tiyeske.

## **TLAKAYUTL**

29.- Ma mo ixute melawalistlakayutl tlakwalle tekite ma tich nawatikan, ma mo ixute nochtlaka tlin tlakoma, ma mohta tlin kipia wan tlin ammo kipia tlin kikwaske, ka inun kwalle tiwepaske, ma tichtlahtlanikan tinochtin tlin moneke mochiuas yenkwik ihkiun tlekanas Mexihco.

Tichchikoihta ahke tichtatahpowia san topan pano, nuwian tlamiktia, nuwian tlaichtehtatla, ahke kypias tlatlakulle ma kitsakwakan ma tlaxtlawa ka tetekitl. Wan axan PRI kineke ma tlame ixkwatlaiwaltemeh noche tlin yu tikihtohke tla kwalle mo chiwas kwalle nan tiyeske kwalle tinemiske.

30.- Nochtlaka ammo mo sewia nochipa topatlatowa sepania, nese ipan tlakayutl, onkan melio, wepawe tlamatilistle wan chihchikawa tlahtohke. Tla kwalle to patlaske nochtin ti tlatsontekiske. PRI kichiwa wan ika motlalia kene ahses kene tlekanas wan mon eke tlamach tinenehtaskeh.

31.- Tikihtowa ma melawak tiwepawikan, melawaliswaxkayutl, tichohtin tikpiaske tlin onyes wan tikektlaliske wan nochtin ma tikmatikan ti tlatsontekiske sowameh wan tlakameh.



32.- Tik neke noch tlakayutl ma kipiakan neltlistin, ma tohtaka ke toikniwan ma tikixmatikan tlin weye ipatin tomasewalikniwan wan nochtlamatilistle. Ahke tichtatahpowe ma tekite itlawk tlakameh, ompun mohtas tlaun poliwe, ma ammo to ixnekwilihtakan tlin ammo okichtlaka, okichtle, tla ammo sowatl tlamatilistle teotlahtulle, wehwelitike, ka kampa witl, tla ammo kipia melio, mon eke ma ammo tochikoihtakan, ma ammo totlayelihtakan.

33.- Oksehpa tikihtowa melawak tikneke ma tikipalewikan to kultsitsiwan, ma tikipalewikan mawepawikan sowantotun, pipiltoton, telpuchewaltin, wan tikipalewiske, setilisyasuwan ihkiun mo tlakayoweyilis.

34.- Tik tenewa ma nochtlaka ma ihkatika ka tiyekan, kampa tinochtin tlakameh wan sowameh tipaktaske, toweyiliske, tlin tikmate ma tomawistilikan, wan tlatinoch tinochtin tomachtiske ometla poliwes ihkiun wepawes to mexihcatlalan.

35.- Mexihkatelpokatl chihchikaktoke, yehwan kpatlaske totlalan. Tehwan tikihkwiniskeh tlin kintsatsakwilia wan kwalle panuske wan wepawiske ka imelawalisnemilis ikiun noch tlamantle wepawes. Tla ammo tikiuxtutoka tlanochtintelpokameh tikipalewiske tinochtin kwalle tiyeske ma tik weyelikan campatekitiske telpokameh ma yewa tlatsonkotunakan ka inun tiktemuske yenkaik Mexihko.

36.- Tla kameh wan sowamh tikin nunutsa kwalle tlamachtlatsontekiske melawalistlakayutl ka inun kwalle tikekanwiske totlalmantsin tlamachtlatsonkotuniakan, ma titetlahtlanikan, ma kwalle titemachiltikm tlaun tiktekita.

37.- Tikmate kenen kinemilia tlakameh, kenen mo sentlalia, kenen mo tenewa kene mo teixmachtia, kene neneme, tla tekiti kipia, tlaun omo machte, tlanamakilistle, teotlatulle wan tlin moneke mo temachtis wan tinochtin kwalle tiyeske.

### **TLI KIEWALOWA TLALTIKPAKTSINTLE**

38.- Titlamachtekite tlin tikchiwa, tlin tikintowa titlatsontekiske tinochtin sepan tiaske wan kwalle tinemiske nan toyeyampa.

39.- In PRI kin kwepilia tlin yehwan okitekitke wan ipan tlahtowa, ammo to mahmakaske, ipan tlahtowa tlin ammo kwalle omihto, ikiun kwalle tinemiskeh ipan tlaltikpaktsintle wan nochtlaka ma tonunmtsakan.

40.- Tehwan titlamachtlahtoke PRI tikneke ma tlamach to nunutsakan, ma tlamach titekitikan wan tlamach ma titlahtlanika wan titlatsontekikan, nochtin altepemehtlin timate ipan tlaltikpaktsintle, kwan ammo ikiun mochiwa pewa tomamapewa, toixkomaka wan tich xixene, Mexihko kineneke ma tinochtintitlatsontekiken ma tokamatlahtul tikchikawakan, ipanin tlaltikpak, ma tikwepawakan, ma totominweyilikan ipan tiankistin tlin mo nextia ipan nan totlalan, wan ihkiun tikchichikawalutia totlalan.

41.- Ma ipan titlachakan tlin ammo tochantlaka, sowameh, sowantutun, pipiltoton, telpuchewaltin tlin ahse nan tochan, ompa ichan kincholultia ammo kwaltintlaka wan tlin kintatapowia ma ipan titlachakan tomexihkaikniwan tlin yawe wehkatlalle.

42.- Weye tlahtohke, weyetahpohke ma tikmawistilikan noche tlin kipia, noche inemiliswan alatepeme, ma tiktlakaihtakan tlin ammo tochanichan tlin witse wehka, ompa wehka tlaltin, wan tiktlakaihta noch tlin yenkwik kistok, noche ma tik mawistilikan tlin tichpahchiwa, tlin tichtlakwalmaka ipan tlaltikpaktsintle.

### **TLIN AMMO WEHKAWE**

Se tikimakilistle inin XXII Asamblea Nacional tla kin patlas melawalistlakayumeh ye kwalle ipan tomatlakechiske kwak tlamach kiseliske ka ineltis la Legislación Electoral.

Kwak yu kinselele melawalistlakayumeh, ni ma kin temachiltiske ipan Organo Oficial kompa titemachiltia del Partido Revolucionario Institucional. “La República” ipan tsonteko sentlalilmahchutille.

Traductores

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Náhuatl

the  $\mathbb{R}^n$  is a linear space over  $\mathbb{R}$  with the usual addition and scalar multiplication. The inner product is defined by

$$\langle x, y \rangle = \sum_{i=1}^n x_i y_i \quad (1)$$

where  $x = (x_1, \dots, x_n)$  and  $y = (y_1, \dots, y_n)$  are vectors in  $\mathbb{R}^n$ . The norm of a vector  $x$  is defined by

$$\|x\| = \sqrt{\langle x, x \rangle} = \sqrt{\sum_{i=1}^n x_i^2} \quad (2)$$

The distance between two vectors  $x$  and  $y$  is defined by

$$d(x, y) = \|x - y\| = \sqrt{\sum_{i=1}^n (x_i - y_i)^2} \quad (3)$$

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  is called the unit sphere and is denoted by  $S^{n-1}$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  is called the unit ball and is denoted by  $B^n$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = r$  is called the sphere of radius  $r$  and is denoted by  $S_r^{n-1}$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq r$  is called the ball of radius  $r$  and is denoted by  $B_r^n$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 \geq 0$  is called the upper hemisphere and is denoted by  $S^{n-1}_+$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 \geq 0$  is called the upper half-ball and is denoted by  $B^n_+$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 \leq 0$  is called the lower hemisphere and is denoted by  $S^{n-1}_-$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 \leq 0$  is called the lower half-ball and is denoted by  $B^n_-$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  is called the equator and is denoted by  $S^{n-2}$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  is called the equatorial disk and is denoted by  $D^{n-1}$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 \geq 0$  is called the upper equator and is denoted by  $S^{n-2}_+$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 \geq 0$  is called the upper equatorial disk and is denoted by  $D^{n-1}_+$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 \leq 0$  is called the lower equator and is denoted by  $S^{n-2}_-$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 \leq 0$  is called the lower equatorial disk and is denoted by  $D^{n-1}_-$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  is called the equatorial point and is denoted by  $S^{n-2}$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  is called the equatorial point and is denoted by  $D^{n-1}$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 \geq 0$  is called the upper equatorial point and is denoted by  $S^{n-2}_+$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 \geq 0$  is called the upper equatorial point and is denoted by  $D^{n-1}_+$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 \leq 0$  is called the lower equatorial point and is denoted by  $S^{n-2}_-$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 \leq 0$  is called the lower equatorial point and is denoted by  $D^{n-1}_-$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  is called the equatorial point and is denoted by  $S^{n-2}$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  is called the equatorial point and is denoted by  $D^{n-1}$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  and  $x_4 \geq 0$  is called the upper equatorial point and is denoted by  $S^{n-2}_+$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  and  $x_4 \geq 0$  is called the upper equatorial point and is denoted by  $D^{n-1}_+$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  and  $x_4 \leq 0$  is called the lower equatorial point and is denoted by  $S^{n-2}_-$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  and  $x_4 \leq 0$  is called the lower equatorial point and is denoted by  $D^{n-1}_-$ .

The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| = 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  and  $x_4 = 0$  is called the equatorial point and is denoted by  $S^{n-2}$ . The set of all vectors  $x$  in  $\mathbb{R}^n$  such that  $\|x\| \leq 1$  and  $x_1 = 0$  and  $x_2 = 0$  and  $x_3 = 0$  and  $x_4 = 0$  is called the equatorial point and is denoted by  $D^{n-1}$ .