

A Translation of Euclid's Elements Book One into Ewe

Translated by

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Abstract

In this paper, I have translated Euclid's Element Book One into the Ewe language of Ghana, Togo and the Republic Benin. It is my hope that this translation will inspire researchers across Africa to translate Euclid into their respective languages.

Numededewo (Definitions)

1. Tefe nye esi si akpa me le o
2. Fli nye dzidzime aɖe si si kekeme mele o
3. Fliwo fe sefewo nye tefewo
4. Fli-dzɔɔɖe nye fli si dze anyi nyuie, si dzi tefewo le
5. Gbadzame nye esi si kekeme kple kɔkɔme le
6. Gbadzame fe sefewo nye fliwo
7. Bali nye gbadzame si fe fli-dzɔɔɖewo dze anyi nyuie ɖe wo ɖokui dzi
8. Dzogoeme-djabui nye fli-djabui eve siwo lialiam alo ɖiɖim eye wo do go wonɔewo le bali aɖe me eye wo me nye fli siwo dzɔ ɖe wonɔewo dzi o
9. Eye ne fli-djabui siwo fe gododo he dzogoeme ve nye fli-dzɔɔɖewo la, wo yɔna dzogoeame be dzogoeme-djabui
10. Ne wo ta fli dzɔɔɖe aɖe wo tsi tsitre ɖe fli-dzɔɔɖe bubu aɖe dzi, eye dzogoeme siwo le wo fe akpawo dzi so kple wonɔewo la, dzogoeme eveawo siwo so nye dzogoeme blasiekewo, woɔ fli-dzɔɔɖe si tsi tsitre ɖe nɔvia dzi be tsitre-tsitsi-fli
11. Dzogoeme si lolo awu blasieke gake le sue wu alɔfa ɖeka kple blanyi nye dzogoeme si lolo wu dzogoeme blasieke
12. Dzogoeme si le sue wu dzogoeme blasieke nye dzogoeme si le viẽ wu dzogoeme blasieke
13. Lifo nye nane fe sefewo dzi
14. Tata nye nusi le lifo aɖe alo lifowo me
15. Fli-koto nye tata-dzeanyi aɖe si fli ɖeka aɖe wo le ale be fli-dzɔɔɖe siwo tso e fe to vayi e fe domezã so kple wonɔewo
16. Eye tefea wo yɔ na be fli-kotoa fe domezã
17. Fli-koto aɖe fe afã-fli nye fli-dzɔɔɖe si wo ta wo to domezã eye wo se ɖe fli-kotoa fe to, le alea fli dzɔɔɖe mã fli-kotoa me ɖe akpa eve
18. Fli-koto fe afã nye tata si afã-flia hena ve. Efe domezã so kple fli-kotoa fe domezã

19. Tata si fli dzodzoe-djabuiwo wo nye esi dzo tso fli- dzodzewo me, etĩ tata nye esiwo dzo tso fli-dzodzewo etĩ me, dzogoe-ene nye esiwo dzo tso fli- dzodzewo ene me, eye gbogbowo nye esiwo dzo tso fli-dzodzewo gedewo me
20. Le dzogoe-etĩ tatawo me la, dzogoe-etĩ nye esi fe to etĩwo so, dzogoe-etĩ si fe to ewewo so nye esi fe to eve koe so, eye dzogoe-etĩ si fe towo me so o nye esi fe to etĩwo me so o
21. Tso yi edzi la, le dzogoe-etĩ tatawo dome la, dzogoeme blasieke dzogoe-etĩ nye esi si dzogoeme blasieke le, wu-blasieke dzogoe-etĩ nye esi fe dzogoemewo lolo awu blasieke gake le sue awu alfa deka blanyi eye vie-wu-blasieke dzogoe-etĩ nye esi fe dzogoeme etĩwo le sue awu blasieke.
22. Le dzogoe-ene tatawo dome la, axa-ene nye esi fe towo kata so eye wo le dzogoeme-blasieke me; toamasomaso nye esi fe dzogoemewo nye blasieke gake etoawo kata me so o; toawoso nye esi fe toawo so gake efe dzogoemewo menye blasieke o; tosose nye esi fe to eve si wo dze ngo wonzewo kple dzogoeme eve siwo le to siwo dze ngo wonzewo so gake toawo kata me so o eye dzogoemewo ha menye blasieke o. Eye mina dzogoe-ene bubuwo siwo mele abe esiawo ene nanye trapezia.
23. Aduadu-fliwo nye fli-dzodzewo siwo le bali deka kple akpa deka me eye ne wo ta wo tɛgbɛ la, wo me doa go wonzewo le afi adeke o.

Nyagblɔlɔwo si wotu de ke me (Postulates)

Mina mia gblɔ esiawo

1. Na ta fli-dzodzoe tso tefe ade ayi tefe ade
2. Na ta fli-dzodzoe si sedofe li na edziedzi de fli-dzodzoe ade dzi
3. Na ta fli-koto si fe domezã kple dzidzime anye desiaɖe
4. Be dzogoeme-blasieke desiaɖe so kple wonzewo
5. Be ne fli-dzodzoe ade mumum anyi dzem de fli-dzodzoe eve dzi na dzogoeme si le eme siwo dze ngo wonzewo le sue awu dzogoeme-blasieke eve la, ne wo ta fli-dzodzoeawo tẽ la, wo doa go le to si me dzogoeamewo le sue awu dzogoeme-blasieke eveawo

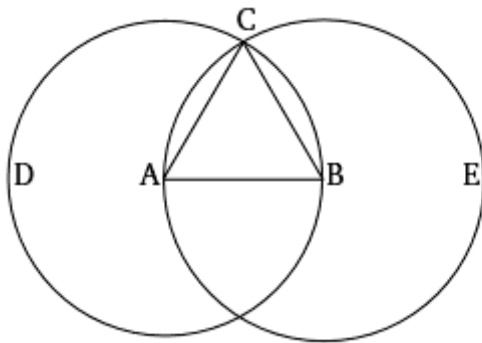
Nyagbɔgblɔ siwo bo (Common Notions)

1. Nusiwo so kple nu deka ha so kple wonzewo
2. Ne ekpe nusiwo so de nusiwo so nu la, bliboawo ha aso
3. Ne ede nusiwo so le nusiwo so me la, nusiwo kpɔto ha aso

4. Nusiwo dogo wonɔewo ha sɔ kple wonɔewo
5. Blibo lolo awu akpa

Proposition 1

Le fli-dzɔdzɔe si seɔfofe li na dzi, wo ata dzogoe-etɔ si fe to etɔwo sɔ



Na AB nanye fli-dzɔdzɔe si si seɔfofe le

Ta edze be mia ta dzogoe-etɔ si fe towo sɔ ɔe fli-dzɔdzɔe AB dzi

Tsɔ A wo anye domezã eye dzidzimea na nye AB, na ta fli-koto BCD; [Post. 3]

na ga tsɔ B wo anye domezã eye dzidzimea na nye BA, ta fli-koto ACE; [Post. 3]

eye tso te fe C si ke nye te fe si fli-kotoawo sã wonɔewo me la, tsɔ yi te fe A, B la mina mia ta fli-dzɔdzɔe CA kple CB [Post. 1]

Fifia esi wonye be te fe A nye fli-koto CDB fe domezã,

AC sɔ kple AB [Def. 15]

Ga yi edzi la, esi wonye B nye fli-koto CAE fe domezã,

BC sɔ kple BA [Def. 15]

Gake CA ha sɔ kple AB

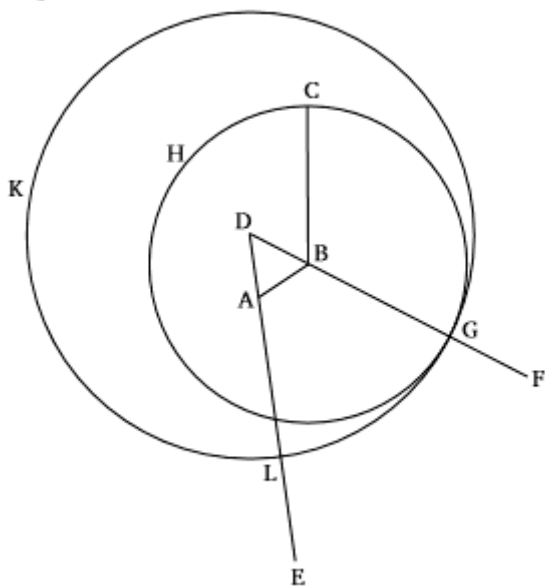
Eyata fli-dzɔdzɔe CA kple CB sɔ kple AB

Eye nusiwo sɔ kple nu ɔeka ha sɔ kple wonɔewo [C.N. 1]

Eyata dzogoe-etɔ ABC fe to etɔwo sɔ; eye mietae ɔe fli-dzɔdzɔe si seɔfofe li na AB dzi

Proposition 2

Na da ɗe tefe aɗe [sefe aɗe] fli-dzɔdzɔe si so kple fli-dzɔdzɔe si wo na mi

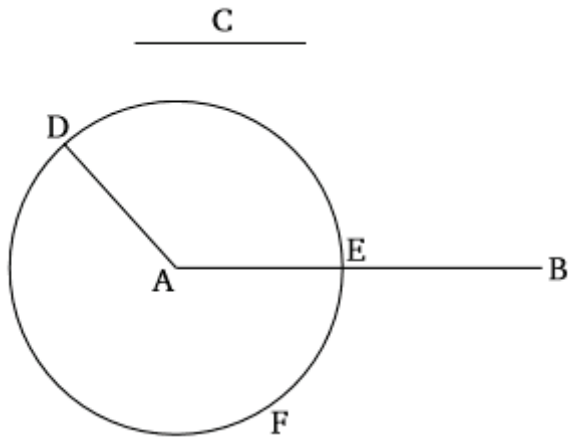


Mina A nanye tefe si wo na mi, eye BC nanye fli-dzɔdzɔe si wo na mi
 Ta edze be miada fli-dzɔdzɔe aɗe ɗe tefe A [sefe aɗe] wo asɔ kple fli-dzɔdzɔe BC
 Mina mia ta fli AB tso tefe A yi tefe B; [Post.1]
 eye le edzi la mina mia ta dzogoe-etɔ̃ DAB [I.1]
 Mina mia ta fli-dzɔdzɔe AE, DF wo adzɔ ɗe DA, DB dzi [Post.2];
 le domezã sinnye B eye dzidzime BC mina mia ta fli-koto CGH [Post.3];
 ake le domezã D eye dzidzime DG, mina mia ta fli-koto GKL [Post.3];
 Esi tefe B nye fli-koto CGH fe domezã,
 BC sɔ kple BG
 Eye le esia me la, DA sɔ kple DB;
 Eyata nusi kpɔtɔ AL sɔ kple nusi kpɔtɔ BG [C.N.3].
 Gake wo ɗi fia be BC ha sɔ kple BG;
 Eyata fli-dzɔdzɔe AL, BC sɔ kple BG
 Eye nusiwo sɔ kple nu ɗeka ha sɔ kple wonɔewo; [C.N.1]

 Eyata AL ha sɔ kple BC
 Eyata le tefe A, mieda fli-dzɔdzɔe AL ɗi si sɔ kple fli-dzɔdzɔe BC.
 Enye nusi wo be wo awɔ

Proposition 3

Ne wo na mi fli-dzɔdzɔe eve siwo me sɔ o, mia sɛ fli-dzɔdzɔe le dzidzito me wo asɔ kple sueto



Mina AB, C nanye fli-dzɔdzɔe eve siwo me sɔ o, eye mina AB na nye dzidzito

Ta wo be mia sɛ fli-dzɔdzɔe tso gãto AB me wo asɔ kple sueto C

Le teƒe A, mina mia ta AD wo asɔ kple fli-dzɔdzɔe C [I.2]

Eye le domezã A kple dzidzime AD la,

Mina mia ta fli-koto DEF [Post.3]

Fifia esi wonye be teƒe A nye fli-koto DEF ƒe domezã,

AE sɔ kple AD [Def.15]

Gake C ha sɔ kple AD.

Eyata fli-dzɔdzɔe AE, C wo dometo ɔesiaɔe sɔ kple AD

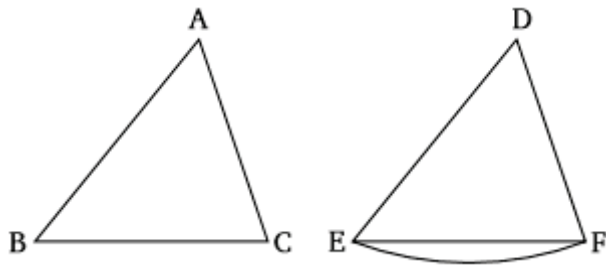
Le ale be AE ha sɔ kple C [C.N.1]

Eyata le fli-dzɔdzɔe eve AB, C si wo na mi la, tso dzidzito AB me, mie sɛ AE wo sɔ kple sueto C

Enye nusi wo be wo awɔ

Proposition 4

Ne dzogoe-etĩ ewewo fe to ewewo so kple wonɔewo, eye dzogoeme siwo fli-dzɔdzɔe eve sɔsɔeawo wo ha so la, wo fe ziwo ha aso kple wonɔewo fe ziwo, dzogoe-etĩa aso kple dzogoe-etĩa, eye dzogoeme siwo kpɔto aso kple esiwo kpɔto, siwo nye esiwo to siwo so wo



Mina ABC, DEF na nye dzogoe-etĩ siwo fe to ewewo AB, AC so kple to eve DE, DF, siwo nye AB kple DE eye AC kple DF, eye dzogoeme BAC so kple dzogoeme EDF.

Me be zi BC ha so kple zi EF, dzogoe-etĩ ABC aso kple dzogoe-etĩ DEF, eye dzogoeme siwo kpɔto aso kple esiwo kpɔto, esiwo to siwo so wo, siwo nye dzogoeme ABC kple dzogoeme DEF, eye dzogoeme ACB kple dzogoeme DFE

Ta, ne wo da dzogoe-etĩ ABC ɔe dzogoe-etĩ DEF dzi eye ne wo da tefe A ɔe tefe D dzi eye fli-dzɔdzɔe AB ɔe DE dzi la, ke tefe B ha adzo ɔe E dzi, elabena AB ha so kple DE.

Ake, AB adzo ɔe DE dzi; fli-dzɔdzɔe AC ha adzo ɔe DF dzi,

elabena dzogoeme BAC so kple dzogoeme EDF eyata tefe C ha adzo ɔe tefe F dzi, elabena AC so kple DF

Gake B ha adzo ɔe E dzi

Eya zi BC adzo ɔe zi EF dzi, eye wo aso kpli [C.N.4]

Eyata dzogoe-etĩ ABC bliboa adzo ɔe dzogoe-etĩ DEF bliboa dzi eye wo aso kpli [C.N.4]

Eye dzogoeme siwo kpɔto adzo ɔe dzogoeme siwo kpɔto dzi eye wo aso kple wo,

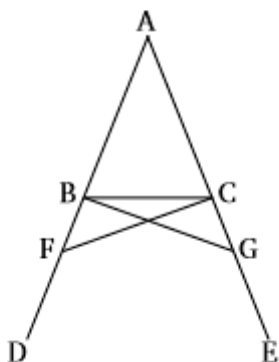
Dzogoeme ABC kple dzogoeme DEF

Eye dzogoeme ACB kple dzogoeme DFE [C.N.4]

Eyata etc

Proposition 5

Le dzogoe-etõ siwo fe to ewewo sɔ, dzogoeme siwo le zia nu sɔ kple wonɔewo, eye ne wo ta fli dzidzi siwo sɔ yi edzi la, dzogoeme siwo le zia te asɔ kple wonɔewo



Mina ABC nanye dzogoe-etõ si fe to ewewo sɔ, eye to AB sɔ kple to AC;
Eye mina mia ta fli-dzɔdzɔe BD, CE wo ayi edzi wo anɔ fli-dzɔdzɔe me kple AB, AC [Post. 2]
Me be dzogoeme ABC sɔ kple dzogoeme ACB, eye dzogoeme CBD sɔ kple BCE.
Mina mia tsɔ te fe F le fli BD dzi ko dɔdɔmanɔnutɔe
Tso AE ga nu la, mina mia sɛ AG wo asɔ kple AF sue la [I.3]
Eye mina mia tsã fli-dzɔdzɔe FC, GB [Post.1]
Ke esi wonye be AF sɔ kple AG eye AB sɔ kple AC,
to ewewo FA, AC sɔ kple to ewewo GA, AB
Eye dzogoeme FAG le wo domi
Eyata zi FC sɔ kple zi GB,
Eye dzogoe-etõ AFC sɔ kple dzogoe-etõ AGB
Eye dzogoeme siwo kpɔtɔ asɔ kple dzogoeme siwo kpɔtɔ, esiwo to siwo sɔ he ve
Siwo nye dzogoeme ACF kple dzogoeme ABG
Eye dzogoeme AFC kple dzogoeme AGB [I.4]
Eye esi wonye be AF bliboa sɔ kple AG bliboa la, eye le esiawo me AB sɔ kple AC,
esi kpɔtɔ BF sɔ kple CG.
Gake mie ɔi fia be FC sɔ kple GB;
Eyata to eve BF, FC sɔ kple to eve CG, GB
Eye dzogoeme BFC sɔ kple dzogoeme CGB
Eye womevea fe zi nye BC
Eyata dzogoe-etõ BFC ha sɔ kple dzogoe-etõ CGB, eye dzogoeme siwo kpɔtɔ asɔ kple dzogoeme
siwo kpɔtɔ, esiwo to sɔsɔewo he ve
Eyata dzogoeme FBC sɔ kple dzogoeme GCB

Eye dzogoeme BCF sɔ kple dzogoeme CBG

Le alea, esi miedɔ fiaɛ be dzogoeme ABG bliboa sɔ kple dzogoeme ACF, eye le esiawo me dzogoeme CBG sɔ kple dzogoeme BCF, dzogoeme siwo kpɔɔ ABC sɔ kple dzogoeme ACB; eye wo le dzogoe-etɔ ABC fe zia nu.

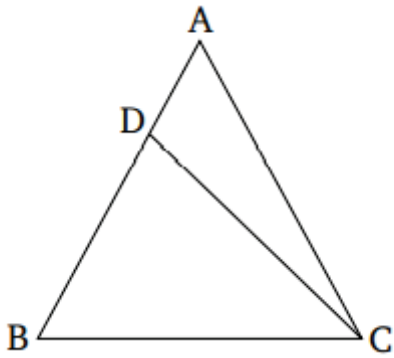
Gake wo dɔ fiaɛ be dzogoeme FBC ha sɔ kple dzogoeme GCB;

Eye wo le zia te

Eyata etc.

Proposition 6

Ne le dzogoe-etɔ me dzogoeme eveawo sɔ kple wonɔewo la, to siwo wo dzogoeme siwo sɔ ha asɔ kple wonɔewo



Mina ABC nanye dzogoe-etɔ si fe dzogoeme ABC sɔ kple dzogoeme ACB

Me be to AB ha sɔ kple to AC

Ke ne AB me sɔ kple AC o la, ke deka nye gãto

Mina AB nanye gãto;

Eye tso gãto AB me la, mina mia sɛ DB ɔa wo asɔ kple sueto AC

Ke esi wonye be DB sɔ kple AC,

Eye BC le wokata me la,

To eveawo DB, BC wo sɔ kple to eveawo AC, CB

Eye dzogoeme DBC sɔ kple dzogoeme ACB;

Eyata zi DC sɔ kple zi AB

Eye dzogoe-etɔ DBC asɔ kple dzogoe-etɔ ACB sueto na gãto;

Si nye avatso

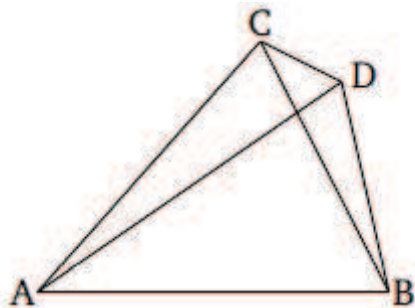
Eyata AB me sɔ kple AC me le eme o

Eyata esɔ kpli

Eyata etc

Proposition 7

Ne wo na mi fli-dzɔdzɔe eve si wo ta ɔe fli-dzɔdzɔe aɔe dzi la [tso efe sefewo], eye wo dogo le tefe aɔe, wo ma atenu ata fli-dzɔdzɔe eve bubu tso efe sefewo ɔe edzi alo tso efe towo siwo adogo le tefe bubu aɔe siwo asɔ kple gbatoowo o, sinƳe esi fe sefe sɔ kple wo



Ne atenu la, le fli-dzɔdzɔe eve AC, CB si wo na mi si wo ta ɔe fli-dzɔdzɔe AB dzi eye wo dogo le tefe C

Mina wo ata fli-dzɔdzɔe eve bubuwo AD, DB ɔe fli-dzɔdzɔe AB ma ke dzi, le to ma ke dzi, siwo dogo le tefe bubu sinƳe D eye wo sɔ kple eve si wo ta va yi, sinƳe ɔesi aɔe kple esi fe sefe sɔ kpli, Le ale be CA sɔ kple DA si fe sefe A sɔ kpli

Eye CB kple DB siwo fe sefe B sɔ kpli

Eye mina mia tsa CD

Ke esi wonƳe be AC sɔ kple AD,

Dzogoeme ACD ha sɔ kple dzogoeme ADC;

Eyata dzogoeme ADC lolo awu dzogoeme DCB;

Eyata dzogoeme CDB lolo bobo wu dzogoeme DCB.

Ake esi wonƳe be CB sɔ kple DB, dzogoeme CDB ha sɔ kple dzogoeme DCB

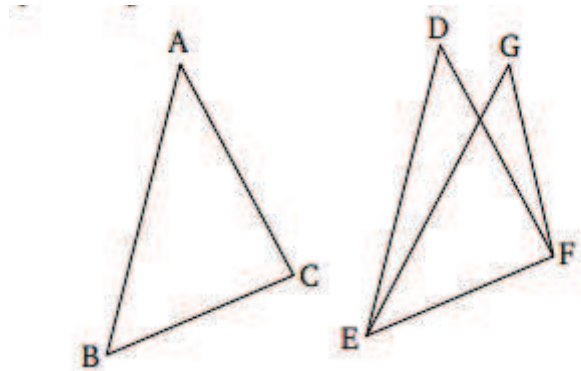
Gake wo ga ɔi fiae be elolo awui

Si ma te nu adzo gbede o

Eyata etc.

Proposition 8

Ne dzogoe-etõ evewo fe to evewo sɔ kple wonɔewo la, eye wo fe ziwo ha sɔ kple wo fe ziwo la, wo fe dzogoeme siwo fli-dzɔdzɔeawo wo ha asɔ

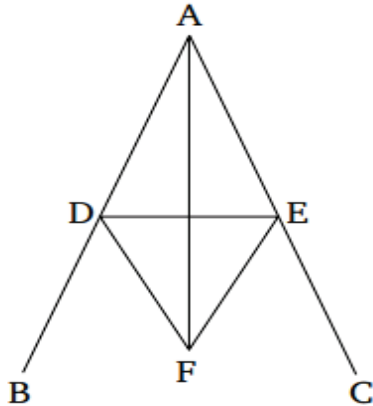


Mina ABC, DEF nanye dzogoe-etõ si fe to evewo AB, AC sɔ kple to evewo DE, DF, sinye AB kple DE, eye AC kple DF;
Eye na zi BC na asɔ kple zi EF;
Me be dzogoeme BAC ha sɔ kple dzogoeme EDF
Ke ne wo da dzogoe-etõ ABC ɔ dzogoe-etõ DEF dzi, eye wo da tefe B ɔ tefe E dzi eye fli-dzɔdzɔe BC ɔ EF dzi,
Tefe C adzɔ ɔ tefe F dzi elabena BC sɔ kple EF
Ta BC adzɔ ɔ EF dzi
BA, AC adzɔ ɔ ED, DF dzi;
Ke ne zi BC dzɔ ɔ zi EF dzi la, eye to BA, AC me dzɔ ɔ ED, DF dzi o, gake dze anyi ɔ wo xa abe EG, GF,
Ke ne wo na mi fli-dzɔdzɔe eve siwo ta ɔ fli-dzɔdzɔe dzi la [tso efe sefowo la] eye wo do go le tefe aɔ la, wo atenu ata fli-dzɔdzɔe eve bubu ɔ fli-dzɔdzɔe ma tutu dzi [tso efe sefowo], kple le to ma tutu dzi, siwo ado go le tefe bubu si sɔ kple eve siwo va yi, siwo nye esiwo fe sefowo sɔ kple wo
Gake wo ma atenu ata wo o [I.7]
Eyata me atenu anɔ eme o be ne wo da zi BC ɔ zi EF dzia, to BA, AC wo ma adzɔ ɔ wonɔewo dzi o;
Eyata wo adzɔ ɔ wonɔewo dzi,
Le ale be dzogoeme BAC ha adzɔ ɔ dzogoeme EDF dzi;
Eye wo asɔ kpli

Eyata etc

Proposition 9

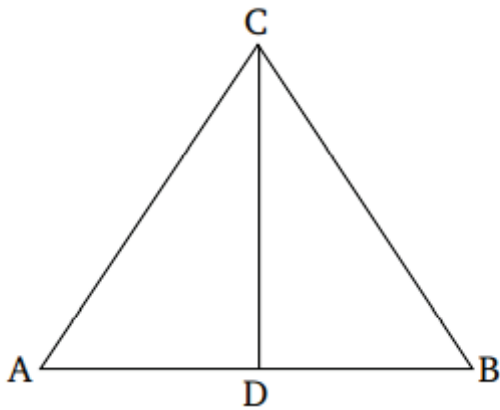
Ne wo amā dzogoeme-djibui aḡe si wo na mi ḡe eve



Mina dzogoeme BAC nanye dzogoeme-djibui si wo na mi
Ta edze be mia mā eme ḡe eve
Mina mia tso teḡe D le AD dzi ko ḡoḡomanḡnutḡe
Mina wo asē AE tso AC me wo asḡ kple AD; [1.3]
Mina mia tsā DE
Eye le DE dzi la, mina mia ta dzogoe-etḡ DEF;
Mina mia tsā AF
Me be fli-dzḡdzḡe AF mā dzogoeme BAC me ḡe eve
Esi wonye AD sḡ kple AE
Eye AF le wokata nu la,
To evea DA, AF wo sḡ kple to eveawo EA, AF
Eye zi DF sḡ kple zi EF
Eyata dzogoeme DAF sḡ kple dzogoeme EAF [1.8]
Eyata fli-dzḡdzḡe AF mā dzogoeme-djibui BAC me ḡe eve.

Proposition 10

Mia mǎ fli-dzɔdzɔe si seɔofe li na si wo na mi ɔe eve



Mina AB nanye fli-dzɔdzɔe si seɔofe li na

Ta edze be mia mǎ fli-dzɔdzɔe si seɔofe li na AB me ɔe eve

Mina mia ta dzogoe-etɔ̄ ABC ɔe edzi [I.1]

Eye mina fli-dzɔdzɔe CD na mǎ dzogoeme ACB me ɔe eve;[I.9]

Me be fli-dzɔdzɔe AB me mǎ ɔe eve le tefe D.

Ta esi wonye AC sɔ kple CB, eye CD le wokata nu la,

To eveawo AC, CD wo sɔ kple to eveawo BC, CD;

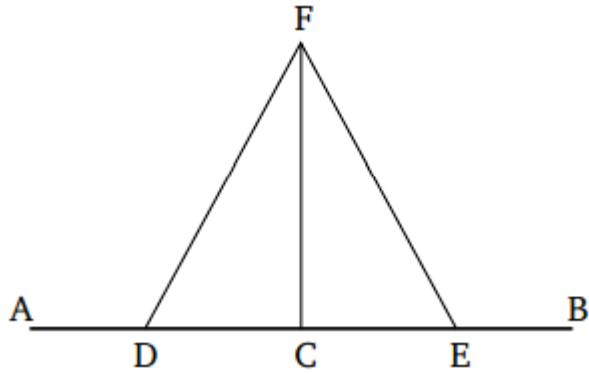
Eye dzogoeme ACD sɔ kple dzogoeme BCD;

Eyata zi AD sɔ kple zi BD [I.4]

Eyata wo mǎ fli-dzɔdzɔe sue AB me ɔe D.

Proposition 11

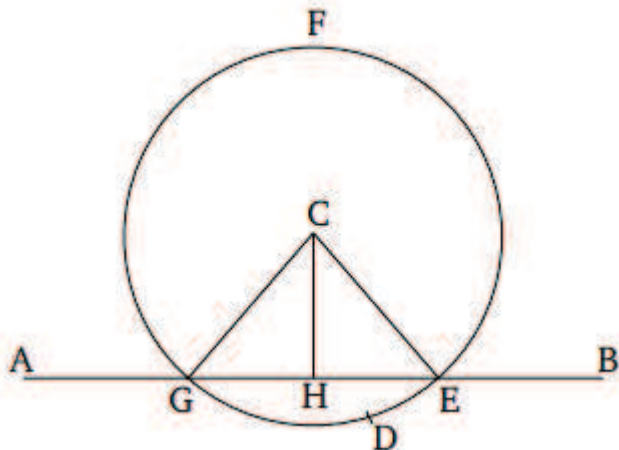
Na ta fli-dzɔdzɔe to tefe aɔe wo ano dzogoeme-blasieke me na fli-dzɔdzɔe si wo na mi.



Mina AB nanye fli-dzodzoe si wo na mi, eye C nanye tefe si wo na mi le edzi
 Ta edze be mia ta fli-dzodzoe wo anɔ dzogoeme-blasieke me na fli-dzodzoe AB tso tefe C
 Mina mia tso tefe D le AC dzi ko dodomanɔnue;
 Mina mia wo CE wo asɔ kple CD; [I.3]
 Le DE dzi la, mina mia ta dzogoe-etɔ̃ FDE [I.1]
 Eye mina mia tsã FC
 Me be wo ta fli-dzodzoe FC wo le dzogoeme-blasieke me na fli-dzodzoe AB si wo na mi tso tefe C
 si wo na mi
 Ta esi wonye DC sɔ kple CE, eye
 CF le wokata nu la,
 To eveawo DC, CF wo sɔ kple to eveawo EC, CF;
 Eye zi DF sɔ kple zi FE;
 Eyata dzogoeme DCF sɔ kple dzogoeme ECF; [I.8]
 Eye wonye dzogoeme si le wonɔewo xa
 Gake ne fli-dzodzoe si wo da ɔ fli-dzodzoe dzi na dzogoeme siwo le wo fe akpawo dzi sɔ kple
 wonɔewo la,
 Dzogoeme siwo kata sɔ nye dzogoeme-blasieke
 Eyata dzogoeme ɔesiaɔɔ DCF, FCE wonye dzogoeme-blasieke [Def. 10]
 Eyata wo ta fli-dzodzoe CF wo le dzogoeme-blasieke me na fli-dzodzoe AB si wo na mi tso tefe C

Proposition 12.

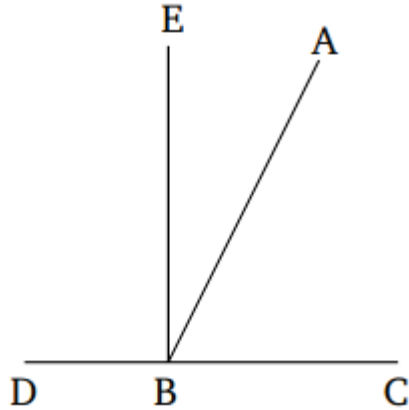
Le fli-dzodzoe legbe si wo na mi la, tso tefe aɔɔ si wo na mi si me le edzi o, wo ata fli-dzodzoe si
 nye tsitsretsitsi-fli



Mina AB nanye fli-dzɔdzɔe legbea eye C nanye tefe si wo na mi si me le edzi o;
 Ta wo be mia ta tsitsretsitsi-fli tso tefe C si me le fli dzɔdzɔea dzi o wo ayi fli-dzɔdzɔea AB dzi
 Ta mina mia tso tefe D ɔɔɔomanɔnue le fli-dzɔdzɔe AB fe to bubu dzi, eye domezã C kple
 dzidzime CD mina mia ta fli-koto EFG [Post.3]
 Mina mia ma fli-dzɔdzɔe EG me ɔe eve le tefe H [I.10]
 Eye mina mia tsã fli-dzɔdzɔe CG, CH, CE [Post. 1]
 Me be wo ta CH wo le tsitsretsitsi me na fli-dzɔdzɔe legbe AB tso tefe C si wo na mi si me le edzi
 o
 Ke esi wonye GH sɔ kple HE, eye HC le wokata nu la,
 To eveawo GH, HC wo sɔ kple to eveawo EH, HC
 Eye zi CG sɔ kple zi CE;
 Eyata dzogoeme CHG sɔ kple dzogoeme EHC [I.8]
 Eye wonye dzogoeme siwo le wonɔewo fe axa dzi
 Gake ne fli-dzɔdzɔe si wo da ɔe fli-dzɔdzɔe dzi na dzogoeme siwo le wonɔewo fe akpawo dzi sɔ la,
 Dzogoeme sɔsoewo ɔesiade nye dzogoeme-blasieke, eye fli-dzɔdzɔe si tsistre tsim ɔe bubua dzi
 le tsitsretsitsi me na esi dzi wo tsi tsistre do [Def.10]
 Eyata wo ta CH wo le tsitsretsitsi me na fli-dzɔdzɔe legbe AB tso tefe C si wo na mi si mele edzi o

Proposition 13

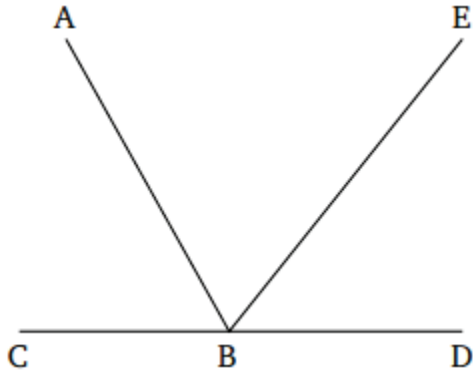
Ne fli-dzɔdzɔe si wo da ɔe fli-dzɔdzɔe dzi wo dzogoemewo la, awɔ dzogoeme-blasieke eve lo alo
 dzogoeme siwo sɔ kple dzogoeme-blasieke eve



Ta na fli-dzɔdzɔe AB si wo da ɔ fli-dzɔdzɔe CD dzi na wo dzogoeme CBA, ABD;
 Me be dzogoeme CBA, ABD wonye dzogoeme-blasieke alo wo sɔ kple dzogoeme-blasieke eve
 Fifia ne dzogoeme CBA sɔ kple dzogoeme ABD, wonye dzogoeme blasieke [Def.10]
 Gake ne wo me sɔ o la, mina mia ta BE tso teƒe B wo anɔ dzogoeme-blasieke me na CD; [I.11]
 Eyata dzogoeme CBE, EBD wonye dzogoeme-blasieke eve
 Ta esi wonye be dzogoeme CBE sɔ kple dzogoeme eve CBA, ABE
 Mina mia tso dzogoeme EBD akpe ɔ ɔsiade nuti
 Eyata dzogoeme CBE, EBD wo sɔ kple dzogoeme etɔ CBA, ABE, EBD [C.N.2]
 Ake, esi wonye be dzogoeme DBA sɔ kple dzogoeme eve DBE, EBA
 Mina mia tso dzogoeme ABC akpe ɔ ɔsiade nuti
 Eyata dzogoeme DBA, ABC wo sɔ kple dzogoeme etɔwo DBE, EBA, ABC [C.N.2]
 Gake wo ɔi fia be dzogoeme CBE, EBD wo ha wo sɔ kple dzogoeme etɔ mawo tututu;
 Eye nusiwo sɔ kple nua zo ha sɔ kple wonɔewo [C.N.1]
 Eyata dzogoeme CBE, EBD wo ha wo sɔ kple dzogoeme DBA, ABC.
 Gake dzogoeme CBE, EBD wonye dzogoeme-blasieke eve
 Eyata dzogoeme DBA, ABC wo ha wo sɔ kple dzogoeme-blasieke eve
 Eyata etc

Proposition 14

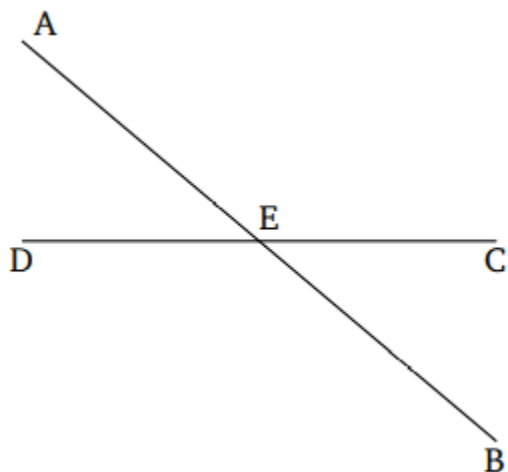
Ne fli-dzɔdzɔe ɔsiade, eye le teƒe aɔ le edzi, fli-dzɔdzɔe eve si wo me mlɔ anyi ɔ to ɔka dzi o
 wo na dzogoeme siwo le wonɔewo fe akpawo dzi sɔ kple dzogoeme-blasieke eve la, fli-dzɔdzɔe
 eveawo anɔ fli-dzɔdzɔe me na wonɔewo



Ta na fli-dzɔdzɔe aɔe AB, eye le tefe B si le edzi,
 Mina fli-dzɔdzɔe eve BC, BD si wo me mlo anyi ɔe to ɔeka o na wo dzogoeme siwo le wonɔewo
 fe akpawo dzi ABC, ABD na so kple dzogoeme-blasieke eve;
 Me be BD le fli-dzɔdzɔe me na CB
 Ke ne BD me le fli-dzɔdzɔe me na BC o la, mina BE na no fli-dzɔdzɔe me na CB
 Ke esi wonye be fli-dzɔdzɔe AB tsi tsitsre ɔe fli-dzɔdzɔe CBE dzi la,
 ABC, ABE wo so kple dzogoeme-blasieke eveawo
 Gake dzogoeme ABC, ABD wo ha wo so kple dzogoeme-blasieke eveawo[1.13]
 Eyata dzogoeme CBA, ABE wo so kple dzogoeme CBA, ABD [Post.4 and C.N.1]
 Mina wo aɔe dzogoeme CBA le wo me
 Eyata dzogoeme si kpɔto ABE so kple dzogoeme si kpɔto ABD, [C.N.3]
 Suetɔ na gãto, si ma te nue o
 Eyata BE me le fli-dzɔdzɔe me na CB o
 Le ema me kea, mi atenu aɔi fia be ɔeka me le fli-dzɔdzɔe me na ɔeke o, ke BD ko.
 Eyata CB le fli-dzɔdzɔe me na BD.
 Eyata etc

Proposition 15

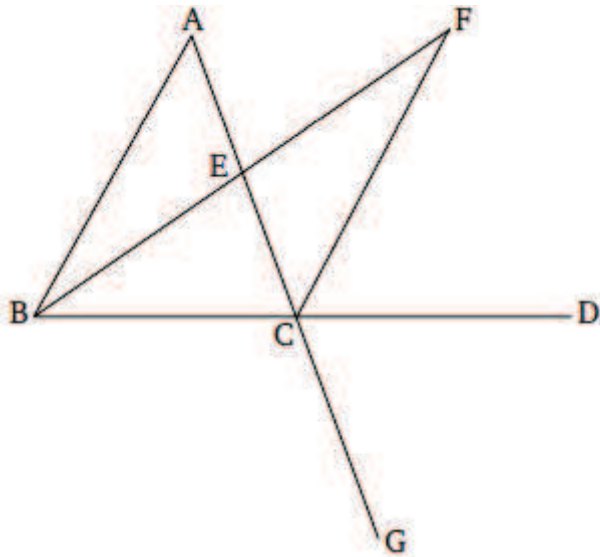
Ne fli-dzɔdzɔe ewewo sɛ wonɔewo la, wo nana dzogoeme si wo dzo ɔe yame so na kple
 wonɔewo



Ta mina fliwo AB, CD na sã wonɔewo me le tefe E;
 Me be dzogoeme AEC sɔ kple dzogoeme DEB,
 Eye dzogoeme CEB kple dzogoeme AED
 Ke esi wonye be fli-dzɔdzɔe AB tsi tsitsre ɔ fli-dzɔdzɔe CD dzi ,
 Eye wo wɔ dzogoeme CEA, AED,
 Dzogoeme CEA, AED wo sɔ kple dzogoeme-blasieke eve [I. 13]
 Ake esi wonye be fli-dzɔdzɔe DE tsi tsitsre ɔ fli-dzɔdzɔe AB dzi la,
 Eye wo wɔ dzogoeme AED, DEB,
 Dzogoeme AED, DEB wo sɔ kple dzogoeme-blasieke eve [I.13]
 Gake wo ɔ fia be CEA, AED wo ha wo sɔ kple dzogoeme-blasieke eve
 Eyata dzogoeme CEA, AED wo sɔ kple dzogoeme AED, DEB.[Post.4 and C.N.1]
 Mina mia ɔ dzogoeme AED le wo me;
 Eyata dzogoeme si kpɔtɔ CEA sɔ kple dzogoeme si kpɔtɔ BED [C.N.3]
 Le ema me kea, wo atɛɛnu aɔ fia be dzogoeme CEB, DEA wo ha wo sɔ
 Eyata etc

Proposition 16

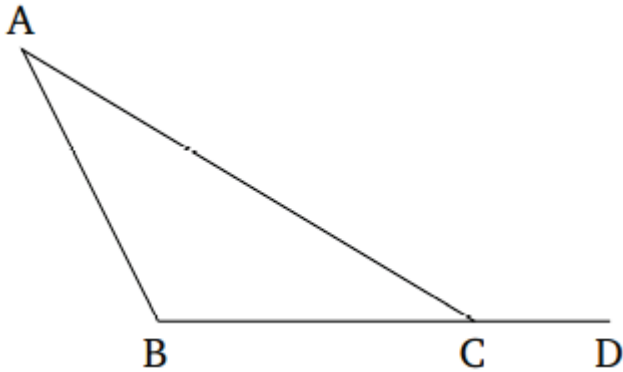
Le dzogoe-etɔ ɔesiade me la, ne wo ta to ɔka tã, dzogoeme si le egodo lolo wu dzogoeme siwo
 le eme siwo wo dze ngo wonɔewo



Mina ABC nanye dzogoe-etõ, eye mina wo ata efe to ðeka BC wo ayi D;
 Me be dzogoeme si le egodo ACB lolo awu dzogoeme siwo le eme siwo dze ngo wonɔewo CBA,
 BAC
 Mina mia sã AC me ðe eve le E, [I.10]
 Eye mina mia tsã BE eye wo atae le fli-dzɔdzɔe me ayi F;
 Mina mia wɔ EF wo asɔ kple BE,[I.3]
 Mina mia tsã FC [Post.1]
 Eye mina mia ta AC wo ayi ake G [Post.2]
 Ke esi wonye be AE sɔ kple EC, eye BE kple EF
 To eveawo AE, EB wo sɔ kple to eveawo CE, EF
 Eye dzogoeme AEB sɔ kple dzogoeme FEC,elabena wo nye dzogoeme si dzɔ ðe yame[I.15]
 Eyata zi AB sɔ kple zi FC, eye dzogoe-etõ ABE sɔ kple dzogoe-etõ CFE
 Eye dzogoeme siwo kpɔɔ sɔ kple dzogoeme siwo kpɔɔ, siwo nye esi to sɔsoewo wɔ;[I.4]
 Eyata dzogoeme BAE sɔ kple dzogoeme ECF
 Gake dzogoeme ECD lolo wu dzogoeme ECF;[C.N.5]
 Eyata dzogoeme ACD lolo wu dzogoeme BAE
 Le ema me kea, ne wo mã BC me ðe eve la, dzogoeme BCG, sinye dzogoeme ACD wo atenju aɖi
 fia be elolo wu ABC ha
 Eyata etc

Proposition 17

Le dzogoe-etõ ðesiadɛ me la, dzogoeme eve si wo tsɔ le go sia go me anɔ sue awu dzogoeme-
 blasieke ewewo



Mina ABC nanye dzogoeme-etõ

Me be dzogoeme eve si wo tso le go sia go me ano sue awu dzogoeme-blasieke eve

Ta mina wo ata BC wo ayi D [Post.2]

Ke esi wonye be dzogoeme ACD nye dzogoeme si le dzogoe-etõ ABC godo la, elolo wu dzogoeme ABC si le eme si dze ngo ði [I.16]

Mina wo atso dzogoeme ACB akpe ðe wo nu;

Eyata dzogoeme ACD, ACB wo lolo wu dzogoeme ABC, BCA

Gake dzogoeme ACD, ACB wo so kple dzogoeme-blasieke eve [I.13]

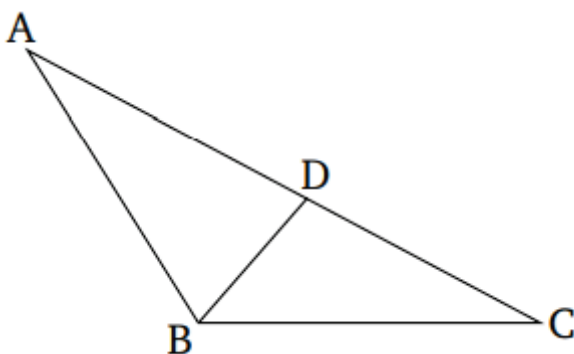
Eyata dzogoeme ABC, BCA wo le sue wu dzogoeme-blasieke eve

Le ema me tutu la, mi atenju aji fia be dzogoeme BAC, ACB wo ha wo le sue awu dzogoeme-blasieke eve, eye esia le eme na dzogoeme CAB, ABC wo ha

Eyata etc

Proposition 18

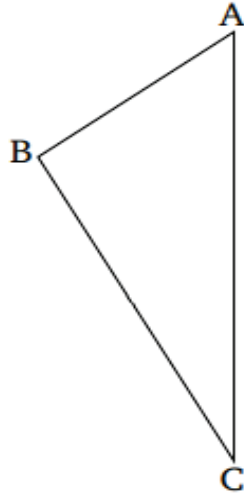
Le dzogoe-etõ ðesiade me la, to gätöe wöna dzogoeme gätö



Ta mina ABC nanye dzogoe-etĩ si fe to AC lolo awu AB;
Me be dzogoeme ABC ha lolo awu dzogoeme BCA
Ta esi wonye AC lolo wu AB la,
Mina wo awɔ AD wo asɔ kple AB,
Eye mina wo atsã BD
Ta esi wonye dzogoeme ADB le dzogoe-etĩ BCD godɔ la
Elolo wu dzogoeme DCB si le eme si dze ngo di [I.16]
Gake dzogoeme ADB sɔ kple dzogoeme ABD,
Esi wonye be to AB sɔ kple AD;
Eyata dzogoeme ABD ha lolo wu dzogoeme ACB;
Eyata dzogoeme ABC lolo bobo wu dzogoeme ACB.
Eyata etc

Proposition 19

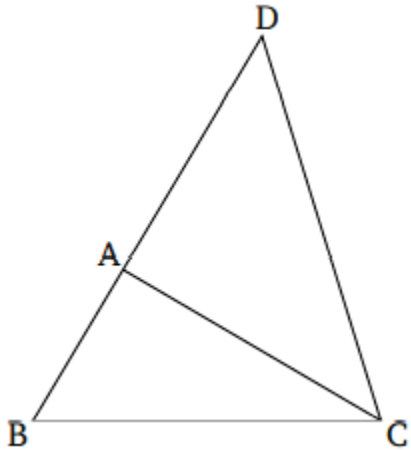
Le dzogoe-etĩ ɖesiɖe me la, dzogoeme gãtɔe wɔna to gãtɔ



Mina ABC nanye dzogoe-etš si fe dzogoeme ABC lolo awu dzogoeme BCA;
 Me be to AC ha lolo wu to AB
 Ne me le eme o la, AC aso kple AB alo ele sue awui
 Fifia AC me so kple AB o
 Ke anye be dzogoeme ABC ha aso kple dzogoeme ACB; [I.5]
 Gake me le eme o/menye nenem o;
 Eyata AC me le sue wu AB o
 AC ha me le sue wu AB o, ke anye dzogoeme ABC ha ano sue wu dzogoeme ACB; [I.18]
 Gake me nye nenem o;
 Eyata AC me le sue wu AB o
 Eye wo di fia be me so ha kpli o
 Eyata AC lolo wu AB
 Eyata etc

Proposition 20

Le dzogoe-etš desiaɖe me la, to eve wokata si wo tso le go sia go mela, lolo awu esi kpoɖo

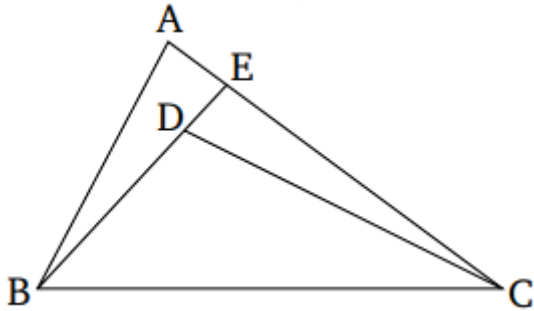


Ta mina ABC nanye dzogoe -etõ;
 Me be le dzogoe-etõ ABC me la, to eve si wo tso le go sia go me wo alolo wu esi wo kptõ
 Siwo nye
 BA, AC lolo wu BC
 AB, BC lolo wu AC
 BC, CA lolo wu AB
 Ta mina mia ta BA wo ayi tefe D,
 Mina wo awõ DA wo asõ kple CA,
 Eye mina mia tsã DC
 Ke esi wonye be DA sõ kple AC
 Dzogoeme ADC ha sõ kple dzogoeme ACD; [I.5]
 Eyata dzogoeme BCD lolo wu dzogoeme ADC
 Eye esi wonye be DCB nye dzogoe-etõ si fe dzogoeme BCD lolo wu dzogoeme BDC, eye
 To gãtõ wõ dzogoeme gãtõ, [I.19]
 Eyata DB lolo awu BC

Gake DA sõ kple AC
 Eyata BA, AC wo lolo awu BC
 Le esia tutu mea, mi aterju aji fia be AB, BC, wo ha lolo awu CA
 Eye BC, CA wo ha lolo awu AB
 Eyata etc

Proposition 21

Ne le dzogoe-etĩ fe toawo dometɔ ɔka dzi, tso efe sefowo dzi, wo ta fli-dzɔdzɔe eve siwo dogo le dzogoe-etĩa me la, fli-dzɔdzɔe si wo ta anɔ sue awu dzogoe-etĩ fe to eve siwo kpɔtɔ, gake awɔ dzogoeeme gãtɔ

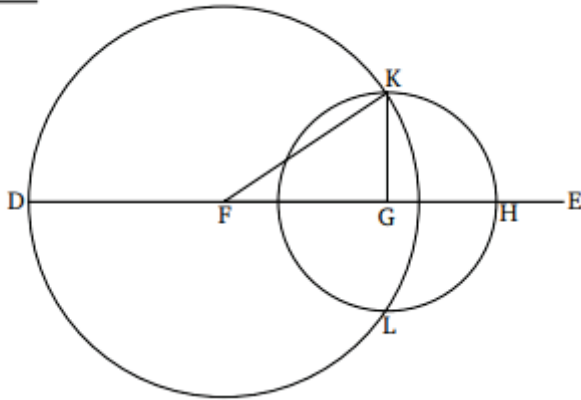


Le BC sinye dzogoe-etĩ ABC fe to ɔka, tso efe dzogoe wo B, C mina wo ata fli-dzɔdzɔe ewewo BD, DC wo ado go le dzogoe-etĩ me;
 Me be BD, DC wo le sue wu dzogoe-etɔ fe to eve BA, AC siwo kpɔtɔ gake dzogoeeme BDC si le wo me si lolo awu dzogoeeme BAC
 Ta mina wo ata BD wo ayi ake E
 Ke esi wonye le dzogoe-etĩ me la, to ewewo lolo awu ɔka si kpɔtɔ la, [I.20]
 Eyata le dzogoe-etɔ ABE me la, to eve AB, AE wo lolo wu BE
 Mina wo atɔ EC akpe ɔe wo nu;
 Eyata BA, AC wo lolo wu BE, EC
 Ake esi wonye le dzogoe-etĩ CED mea
 To eve CE, ED wo lolo wu CD
 Mina wo atɔ DB akpe ɔe wo nu;
 Eyata CE, EB wo lolo wu CD, DB
 Gake wo ɔi fia be BA, AC wo lolo wu BE, EC;
 Eyata BA, AC wo lolo bobobo wu BD, DC
 Ake, esi wo nye be le dzogoe-etĩ me la, dzogoeeme si le egodo lolo na wu dzogoeeme si le eme siwo dze ngo ɔi [I.16]
 Eyata le dzogoe-etĩ CDE
 Dzogoeeme si le egodo BDC lolo wu dzogoeeme CED
 Le susu ma ke ta, ga yi edzia, le dzogoe-etĩ ABE ha mea,
 Dzogoeeme si le egodo CEB lolo wu dzogoeeme BAC
 Gake wo ɔi fia be dzogoeeme BDC lolo awu dzogoeeme CEB;
 Eyata dzogoeeme BDC lolo bobobo wu dzogoeeme BAC
 Eyata etc

Proposition 22

Tso fli-dzɔdzɔe etɔ̃ me, siwo sɔ kple fli-dzɔdzɔe etɔ̃ si wo na mi, mia ta dzogoe-etɔ̃: ta ele vevie be fli-dzɔdzɔe eve wokata si wo tsɔ le go sia go me na lolo awu ɔ̃ka si kpɔtɔ [I.20]

A _____
 B _____
 C _____



Mina fli-dzɔdzɔe etɔ̃ si wo na mi nanye A, B, C eye le esia mea, mina eve si wo tsɔ le go sia go me na lolo wu esi kpɔtɔ, siwo nye

A,B lolo wu C,

A,C lolo wu B

Eye B,C lolo wu A

Ta edze be mia ta dzogoe-etɔ̃ tso fli-dzɔdzɔewo me wo asɔ kple kple A,B,C

Mina mia da fli-dzɔdzɔe aɔ̃ DE ɔ̃, si me sɛ le D gake efe dzidzime le tɛ le E fe akpame

Eye mina wo awɔ DF wo asɔ kple A, FG na sɔ kple B, eye GH na sɔ kple B, eye GH na sɔ kple C

[I.3]

Tso domezã F kple dzidzime FD

Mina mia ta fli-koto DKL;

Ake kple domezã G eye dzidzime GH mina mia ta fli-koto KLG;

Eye mina mia tsã KF,KG

Me be wo ta dzogoe-etɔ̃ KFG tso fli-dzɔdzɔe etɔ̃ siwo sɔ kple A,B,C

Ta esi wonye be teƒe F nye fli-koto DKL fe domezã,

FD sɔ kple FK

Gake FD sɔ kple A;

Eyata KF ha sɔ kple A

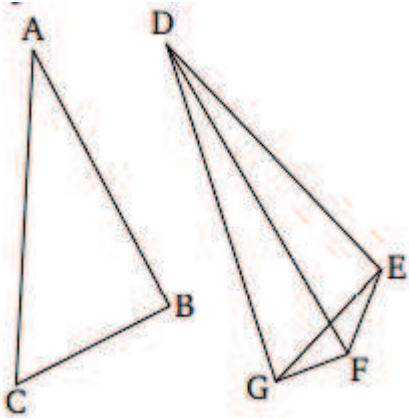
Ake esi wonye be teƒe G nye fli-koto KLG fe domezã

GH sɔ kple GK

Gake GH sɔ kple C

Eyata KG ha sɔ kple C

Eye FG ha sɔ kple B;



Mina ABC, DEF nanye dzogoe-etõ eve si fe to eveawo AB, AC wo sò kple ðE, DF, siwo nye AB kple DE, eye AC kple DF, eye mina dzogoeme A na lolo awu dzogoeme si le D; Me be zi BC ha lolo awu zi EF

Ta esi wonye dzogoeme BAC lolo awu dzogoeme EDF, mina mia ta dzogoeme EDG wo asò kple dzogoeme BAC ðe fli-dzòdzòe DE kple te fe D si le edzi; [I.23]

Mina mia wò DG wo asò kple fli eveawo AC, DF ðeka, eye mina mia tsã EG, FG

Ke esi wonye be AB sò kple ðE,

Eye AC sò kple DG

To eveawo BA, AC wo sò kple to eveawo ED, DG

Eye dzogoeme BAC sò kple dzogoeme EDG;

Eyata zi BC sò kple zi EG [I.4]

Ake esi wonye be DF sò kple DG,

Dzogoeme DFG lolo awu dzogoeme EGF [I.5]

Eyata dzogoeme EFG lolo bobo wu dzogoeme EGF,

Eye esi wonye be EFG nye dzogoe-etõ si fe dzogoeme EFG lolo awu dzogoeme EGF,

Eye to gãto wò dzogoeme gãto [I.19]

To EG ha lolo awu EF

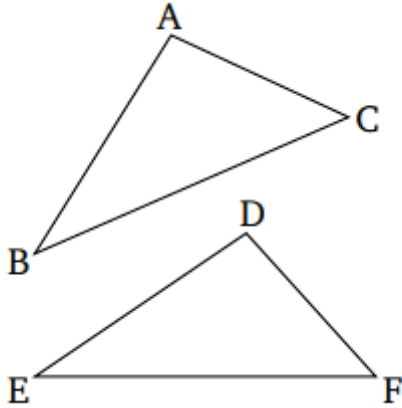
Gake EG sò kple BC

Eyata BC ha lolo wu EF

Eyata etc

Proposition 25

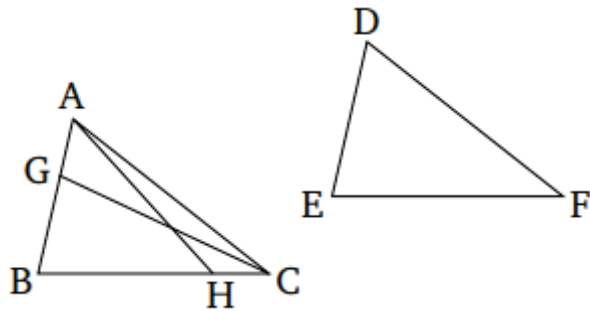
Ne dzogoe-etĩ eve fe to evewo sɔ kple wonɔewo, gake ɔka fe zi lolo awu evelia fe zi la, wofe dzogoeme si fli-dzɔdzɔe sɔsɔea wɔ alolo awu evelia tɔ



Mina ABC, DEF nanye dzogoe-etĩ eve siwo fe to evewo AB, AC sɔ kple to eve DE, DF;
Eye mi na zi BC na lolo wu zi EF;
Me be dzogoeme BAC ha lolo wu dzogoeme EDF
Ne me le eme o la, ke asɔ kpɔli alo ele sue wui
Fifia dzogoeme BAC me sɔ kple dzogoeme EDF o; ne ɔka wo sɔ kpɔli la anye zi BC ha ɔka wo asɔ
kple zi EF
Gake me le eme o;
Eyata dzogoeme BAC me sɔ kple dzogoeme EDF o
Me ga le eme o be dzogoeme BAC le sue wu dzogoeme EDF;
Ke anye zi BC anɔ sue wu zi EF, gake me le eme o;
Eyata dzogoeme BAC me le sue wu dzogoeme EDF o.
Gake wo ɔka fia be me sɔ kpɔli ha o
Eyata dzogoeme BAC lolo wu dzogoeme EDF.
Eyata etc

Proposition 26

Ne dzogoe-etĩ evewo fe dzogoeme eve sɔ kple dzogoeme evewo, eye to ɔka sɔ kple to ɔka,
sinye to si te ɔka dzogoeme sɔsɔewo nu lo alo le esi dzogoeme sɔsɔewo wɔm, wo fe to siwo kpɔtɔ
asɔ kple to siwo kpɔtɔ, eye dzogoeme siwo kpɔtɔ kple dzogoeme siwo kpɔtɔ



Mina ABC, DEF nanye dzogoe-etõ eve siwo fe dzogoeme eve ABC, BCA sɔ kple dzogoeme eve DEF, EFD, siwo nye dzogoeme ABC kple dzogoeme DEF, eye dzogoeme BCA kple dzogoeme EFD; eye mina wo fe to ɔka ha na sɔ kple to ɔka, gba esi te ɔ dzogoeme sɔsoewo nu, siwo nye BC kple EF;

Me be wo fe to siwo kpɔɔ asɔ kple to siwo kpɔɔ, siwo nye AB na E eye AC na DF, eye dzogoeme siwo kpɔɔ na dzogoeme siwo kpɔɔ; siwo nye dzogoeme BAC na dzogoeme EDF

Ta ne AB me sɔ kple DE o la, ke ɔka lolo wu.

Mina AB na nye gãɔ, eye mina mia wɔ BG wo asɔ kple DE; eye mina mia tsã GC

Ke esi wonye be BG sɔ kple DE, eye BC kple EF,

To eveawo GB, BC wo sɔ kple to eveawo DE, EF

Eye dzogoeme GBC sɔ kple dzogoeme DEF;

Eyata zi GC sɔ kple zi DF,

Eye dzogoe-etõ GBC sɔ kple dzogoe-etõ DEF

Eye dzogoeme siwo kpɔɔ asɔ kple dzogoeme siwo kpɔɔ, siwo nye esiwo dzogoeme sɔsoewo wɔ;

Eyata dzogoeme GCB sɔ kple dzogoeme DFE

Gake wo tsɔe be dzogoeme DFE sɔ kple dzogoeme BCA;

Eyata dzogoeme BCG sɔ kple dzogoeme BCA

Suetɔ na gãɔ: si ma te nue o

Eyata me nye be AB me sɔ kple DE,

Eyata esɔ kpli

Gake BC ha sɔ kple EF;

Eyata to eveawo AB, BC wo sɔ kple to eveawo DE, EF

Eye dzogoeme ABC sɔ kple dzogoeme DEF

Eyata zi AC sɔ kple zi DF,

Eye dzogoeme si kpɔɔ BAC sɔ kple dzogoeme si kpɔɔ EDF.

Ake mina to siwo he dzogoeme sɔsoewo ve na sɔ, abe AB kple DE;

Me ga gblɔ be to siwo kpɔɔ asɔ kple to siwo kpɔɔ, siwo nye AC kple DF eye BC kple EF, eye tsɔ yi edzia dzogoeme BAC si kpɔɔ asɔ kple dzogoeme EDF si kpɔɔ

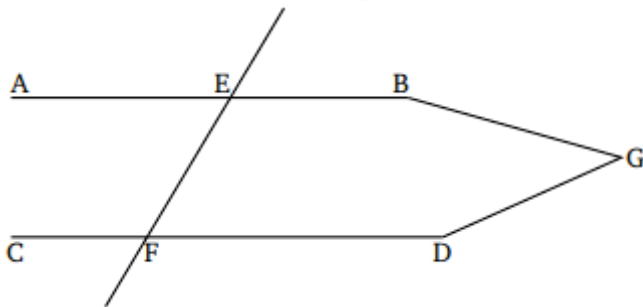
Ke ne BC me sɔ kple EF o la,

Ke ɔka lolo wu

Mina BC na nye gãto, ne atenje,
 Mina mia wo BH wo aso kple EF;
 Mina mia tsã AH
 Ta esi wonye BH so kple EF,
 Eye AB na DE,
 To eveawo AB, BH wo so kple to eveawo DE, EF
 Eye wo fe dzogomewo ha so
 Eyata zi AH so kple zi DF
 Eye dzogoe-etõ ABH so kple dzogoe-etõ DEF
 Eye dzogome siwo kpõto aso kple dzogome siwo kpõto, siwo nye esiwo to sosoewo wo
 Eyata dzogome BHA aso kple dzogome EFD.
 Gake dzogome EFD so kple dzogome BCA;
 Eyata le dzogoe-etõ AHC mea, dzogome si le egodo BHA so kple dzogome si le eme eye wo
 dze ngo de BCA: si me atenu ano eme o
 Eyata menye BC me so kple EF o
 Eyata eso kpli
 Gake AB ha so kple DE;
 Eyata to eveawo AB, BC wo so kple to eveawo DE, EF
 Eye dzogome sosoewo le wo me;
 Eyata zi AC so kple zi DF,
 Dzogoe-etõ ABC so kple dzogoe-etõ DEF
 Eye dzogome si kpõto BAC so kple dzogome si kpõto EDF
 Eyata etc

Proposition 27

Ne fli-dzodzoe afe si mumum anyi dzem de fli-dzodzoe eve dzi na dzogome si dze ngo wonjewe so la, fli-dzodzoeawo azo adu-adu na wonjewe.

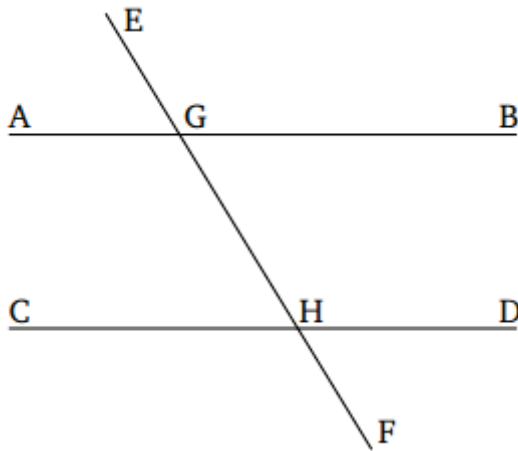


Ta mina fli-dzodzoe EF si anyi dzem de fli-dzodzoe ewewo AB, CD dzi na wo dzogome si dze ngo
 de wonjewe AEF, EFD na so kple wonjewe
 Me be AB zo adu-adu na CD
 Ke ne me le eme o la, ne wo ta AB, CD wo yi dzi te la, wo adogo le B, D fe akpame alo le A,C gbo

Mina wo ata wo tē eye wo adogo le B, D fe akpame le G
 Ke le dzogoe-etō GEF me la
 Dzogoeme si le egodo AEF aso kple dzogoeme si le eme EFG si dze ngo di: si ma te nu ano eme o.
 Eyata ne wo ta AB, CD tē la, wo ma dogo le B, D fe akpame o
 Nenemake wo atenu aḍi fia be wo ma atenu adogo le A, C gbo ha o
 Gake fli-dzodzoe siwo me dogo le akpa aḍe me o la nye adu-adu fliwo
 Eyata AB zo adu-adu na CD
 Eyata etc

Proposition 28

Ne fli-dzodzoe siwo mumum ḍe fli-dzodzoe eve bubu dzi na dzogoeme si le wo godo so kple dzogoeme si le wo me siwo dze ngo wonḍewo le to ḍeka dzi, alo dzogoeme siwo le eme le to ḍeka dzi so kple dzogoeme-blasieke eveawo la, fli-dzodzoeawo azo adu-adu na wonḍewo



Ta mina fli-dzodzoe EF si mumum ḍe fli-dzodzoe eve AB, CD dzi na na dzogoeme si le egodo EGB na so kple dzogoeme si le eme siwo dze ngo GHD, alo dzogoeme si le eme le akpa ḍeka dzi, siwo nye BGH, GHD, na so kple dzogoeme-blasieke ewewo

Me be AB azo adu-adu na CD.

Ta esi wonye be dzogoeme EGB so kple dzogoeme GHD, le ale be dzogoeme EGB so kple dzogoeme AGH

Dzogoeme AGH ha so kple dzogoeme GHD;

Eye wo no wonḍewo tefe;

Eyata AB azo adu-adu na CD

Ake esi wonye be dzogoeme BGH, GHD wo so kple dzogoeme-blasieke eve, eye dzogoeme AGH, BGH wo ha wo so kple dzogoeme-blasieke

AGH, BGH wo so kple dzogoeme BGH, GHD

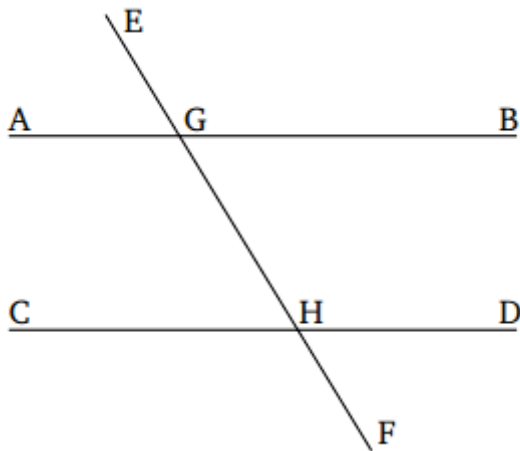
Mina wo aḍe dzogoeme BGH le wo me.

Eyata dzogoeme si kpoṭo AGH so kple dzogoeme si kpoṭo GHD

Eye wo nɔ wonɔewo tefe
 Eyata AB zɔ adu-adu na CD
 Eyata etc.

Proposition 29

Fli-dzɔdzɔe si mumum ɔe adu-adu-fli dzɔdzɔewo dzi na dzogoeme si le wonɔewo godo sɔ kple wonɔewo, dzogoeme si le egodo sɔ kple esi le eme eye wo dze ngo di, eye dzogoeme siwo le eme le to ɔka dzi sɔ kple dzogoeme-blasieke eve

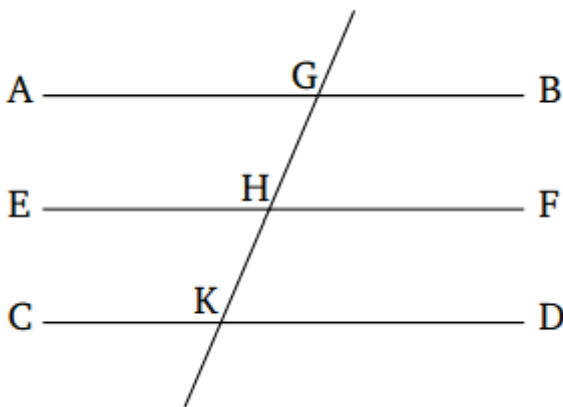


Ta na fli-dzɔdzɔe EF na mu ɔe adu-adu fli-dzɔdzɔewo AB, CD dzi;
 Me be ana dzogoeme si le wonɔewo godo AGH, GHD asɔ , dzogoeme si le egodo EGB asɔ kple dzogoeme si le eme
 Eye wo dze ngo ɔi GHB, eye dzogoeme si le wo me le to ɔka dzi, siwo nye BGH, GHD sɔ kple dzogoeme-blasieke eve
 Ke ne dzogoeme AGH me sɔ kple dzogoeme GHD o la, ɔka nye gãtɔ
 Mina dzogoeme AGH nan ye gãtɔ
 Mina wo atɔ dzogoeme BGH akpe ɔe wo nu
 Eyata dzogoeme AGH, BGH wo iavia EGB;
 Elolo wu dzogoeme BGH, GHD
 Gake dzogoeme AGH, BGH wo sɔ kple dzogoeme-blasieke eve
 Eyata dzogoeme BGH, GHD wo le sue wu dzogoeme-blasieke eve
 Gake fli-dzɔdzɔe si wo ta tẽ tso dzogoeme siwo le sue wu dzogoeme-blasieke doa go;
 Eyata ne wo ta AB, CD tẽ la, wo ado go;
 Gake wo me do go o, elabena wo tsɔe be wonye adu-adu fliwo.
 Eyata dzogoeme AGH menye dzogoeme si me sɔ kple dzogoeme GHD,
 Eyata esɔ kpli
 Ake dzogoeme AGH sɔ kple dzogoeme EGB;
 Eyata dzogoeme EGB ha sɔ kple dzogoeme GHD.

Mina wo atso dzogoeme BGH akpe de desiafe nu
 Eyata dzogoeme EGB, BGH wo so kple dzogoeme BGH, GHD
 Gake dzogoeme EGB, BGH wo so kple dzogoeme-blasieke eve
 Eyata dzogoeme BGH, GHD wo ha wo so kple dzogoeme-blasieke eve
 Eyata etc.

Proposition 30

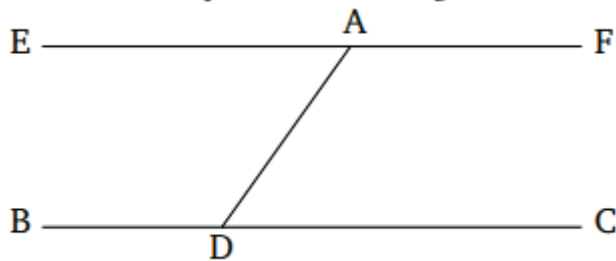
Fli-dzodzoe siwo zo adu-adu na fli-dzodzoe deka tututu ha zo adu-adu na wonjowo.



Mina fli-dzodzoe desiafe AB, CD na zo adu-adu na EF;
 Me be AB ha zo adu-adu na CD
 Ta mina fli-dzodzoe GK na mu adze wo dzi
 Ke esi wonye be fli-dzodzoe GK mu dze adu-adu-fliwo AB, EF dzi
 Dzogoeme AGK so kple dzogoeme GHF
 Ake esi wonye be fli-dzodzoe GK mu dze adu-adu-fliwo EF, CD dzi la,
 Dzogoeme GHF so kple dzogoeme GKD
 Gake wo di fia be dzogoeme AGK so kple dzogoeme GHF;
 Eyata dzogoeme AGK ha so kple dzogoeme GKD;
 Eye wo dze ngo wonjowo
 Eyata AB zo adu-adu na CD.

Proposition 31

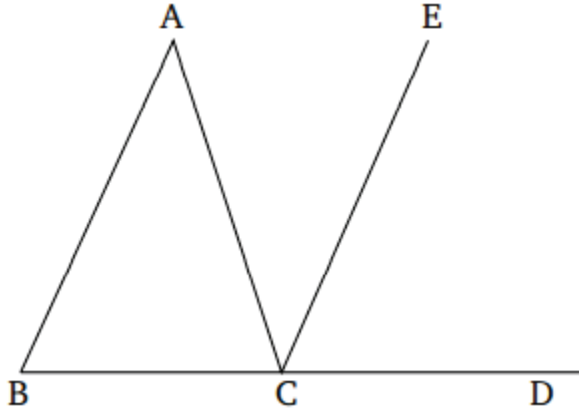
To tefe ađe si wo na mi, miata fli-dzɔdzɔe si azɔ adu-adu na fli-dzɔdzɔe si wo na mi



Mina A nanye tefe si wo na mi
eye BC nanye fli-dzɔdzɔe si wo na mi
ta edze be mia ta fli-dzɔdzɔe to tefe A wo azɔ adu-adu na fli-dzɔdzɔe BC
Mina wo atɔ tefe D le BC dzi dodomanɔnutoe, eye mina wo atɔ AD;
Le fli-dzɔdzɔe DA dzi, eye le tefe A le edzi, mina wo ata dzogoeme DAE wo asɔ kple dzogoeme ADC;
Eye mina wo ata fli-dzɔdzɔe AF tẽ kple EA
Ke esi wonye be fli-dzɔdzɔe AD mumum ɔ fli-dzɔdzɔe eve BC, EF dzi na dzogoeme si dze ngo wonɔewo EAD, ADC sɔ kple wonɔewo
Eyata EAF zɔ adu-adu na BC
Eyata to tefe siwo na mi A wo ta fli-dzɔdzɔe EAF wo zɔ adu-adu na fli-dzɔdzɔe BC si wo na mi

Proposition 32

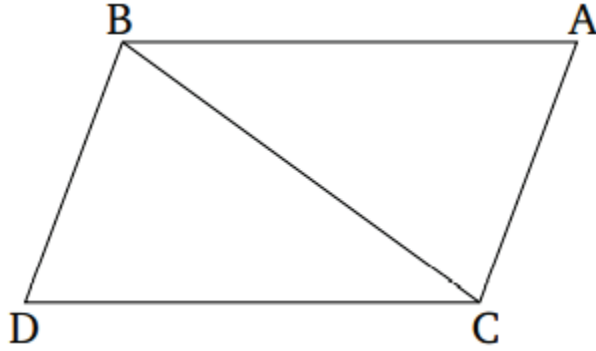
Le dzogoe-etɔ ɔsiade me la, ne wo ta to ɔka tẽ la, dzogoeme si le egodo asɔ kple dzogoeme eve siwo le eme siwo dze ngo wonɔewo, eye dzogoeme etɔ si le dzogoe-etɔ me sɔ kple dzogoeme-blasieke eve



Mina ABC nanye dzogoe-etõ, eye mina wo ata to ðeka BC wo ayi D;
 Me be dzogoeme si le egodo ACD sò kple dzogoeme eve si le eme eye kple esiwo dze ngo
 wonjewe CAB, ABC eye dzogoeme anò si le dzogoe-etõ me ABC, BCA, CAB wo sò kple
 dzogoeme-blasieke eve
 Ta mina wo ata CE wo ayi tefe C wo azò adu-adu na fli-dzòdzòe AB
 Ke esi wonye AB zò adu-adu na CB, eye AC mu ðe wo dzi la,
 Dzogoeme siwo dze ngo wonjewe BAC, ACE wo sò kple wonjewe
 Ake esi wonye be AB zò adu-adu na CE, eye fli-dzòdzòe BD mu dze wo dzi la,
 Dzogoeme si le wo godo ECD sò kple dzogoeme si le eme eye wo dze ngr ðe ABC
 Gake wo ði fia be dzogoeme ACE sò kple dzogoeme BAC
 Eyata dzogoeme ACD kata sò kple dzogoeme si le eme eye wo dze ngo ðe BAC, ABC
 Mina wo atso dzogoeme ACB akpe ðe wo nu;
 Eyata dzogoeme ACD, ACB wo sò kple dzogoe-etõ ABC, BCA, CAB
 Gake dzogoeme ACD, ACB wo sò kple dzogoeme-blasieke eve
 Eyata dzogoeme ABC, BCA, CAB wo ha wo sò kple dzogoeme-blasieke eve
 Eyata etc

Proposition 33

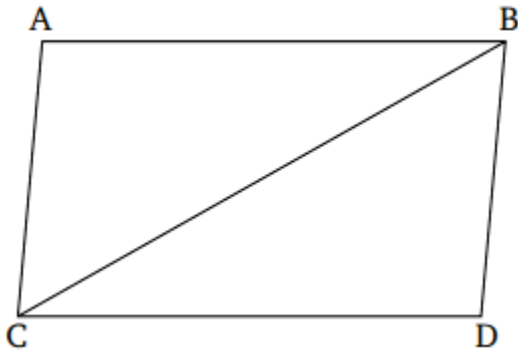
Fli-dzòdzòe siwo adu-adu fli-dzòdzòe sòsòewo tsãm [le wo fe sefewo dzi] le akpa ðeka me, wo ha
 wo sò le woðokui me eye wo zò adu-adu



Mina AB, CD na sɔ eye wo azɔ adu-adu,
 eye mina fli-dzɔdzɔewo AC, BD na tsã wo [le wo fe sefewo dzi] le akpa ɔka me
 Me be AC, BD wo sɔ eye wo zɔ adu-adu
 Mina mia tsã BC
 Ke esi wonye be AB zɔ adu-adu na CD,
 Eye BC mu dze wo dzia,
 Dzogoeme siwo dze ngo wonɔewo ABC, BCD wo sɔ kple wonɔewo
 Eye esi wonye be AB zɔ adu-adu na CD, eye BC le wokata nu la,
 To eveawo AB, BC wo sɔ kple to eveawo DC, CB;
 Eye dzogoeme ABC sɔ kple dzogoeme BCD;
 Eyata zi AC sɔ kple zi BD
 Eye dzogoe-etɔ ABC sɔ kple dzogoe-etɔ DCB
 Eye dzogoeme siwo kpɔɔ asɔ kple dzogoeme siwo kpɔɔ;
 Siwo nye esiwo akpa sɔsoewo he ve;
 Eyata dzogoeme ACB sɔ kple dzogoeme CBD
 Eye esi wonye fli-dzɔdzɔe siwo mumum ɔe fli-dzɔdzɔe eve AC, BD dzi wo na dzogoeme si dze
 ngo wonɔewo sɔ la
 AC zɔ adu-adu na BD
 Eye wo ɔi fia be esɔ kpli
 Eyata etc

Proposition 34

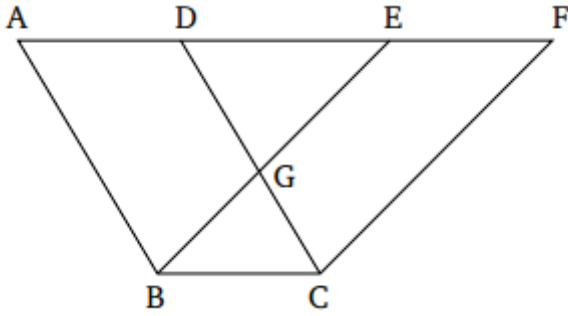
Le dzogoe-ene gbadzamewo/tatawo me la, to kple dzogoemewo siwo dze ngo wonɔewo sɔ kple
 wonɔewo, eye afa-flia mā tata/gbadzamea me ɔe eve



Mina ACDB nanye dzogoe-ene gbadzame aḁe, eye BC nanye efe afa-fli
 Me be to siwo dze ngo wonḁewo eye dzogoe-ene ACDB fe dzogoomewo sɔ kple wonḁewo, eye
 afa-fli BC mǎ wo me ḁe eve
 Ta esi wonye be AB zɔ adu-adu na CD, eye fli-dzɔdzɔe BC mu dze wo dzi la,
 Dzogoeme si dze ngo wonḁewo ABC, BCD wo sɔ kple wonḁewo
 Ake esi wonye be AC zɔ adu-adu na BD, eye BC mu dze wo dzi la,
 Dzogoeme si dze ngo de wo ACB, CBD wo sɔ kple wonḁewo
 Eyata ABC, DCB wonye dzogoe-etɔ̃ si fe dzogoeme eve ABC, BCA sɔ kple dzogoeme eve DCB,
 CBD eye to ḁeka sɔ kple to ḁeka, sinye esi te ḁe dzogoeme sɔsoewo eye wo le wokata domi,BC
 Eyata wo fe akpa si kpɔtɔ asɔ kple akpa si kpɔtɔ, eye dzogoeme si kpɔtɔ asɔ kple dzogoeme si
 kpɔtɔ;
 Eyata to AB sɔ kple CD
 Eye AC sɔ kple BD,
 Eye tsɔ yi edzi la dzogoeme BAC sɔ kple dzogoeme CDB
 Eye esi wonye be dzogoeme ABC sɔ kple dzogoeme BCD,
 Eye dzogoeme CBD sɔ kple dzogoeme ACB,
 Dzogoeme ABD bliboa sɔ kple dzogoeme ACD bliboa
 Eye wo ḁi fia be dzogoeme BAC sɔ kple dzogoeme CDB.
 Eyata le dzogoe-ene gbadzame la, to kple dzogoeme siwo dze ngo wonḁewo sɔ kple wonḁewo
 Me ga gblɔ be afa-flia ha mǎ gbadzamea me ḁe eve
 Ta esi wonye be AB sɔ kple CD, eye BC le wokata wo nu la,
 To eveawo AB, BC wo sɔ kple to eveawo DC,CB
 Eye dzogoeme ABC sɔ kple dzogoeme BCD;
 Eyata zi AC ha sɔ kp zi DB,
 Eye dzogoe-etɔ̃ ABC sɔ kple dzogoe-etɔ̃ DCB
 Eyata afa-fli BC mǎ adu-adu-tata ACDM me

Proposition 35

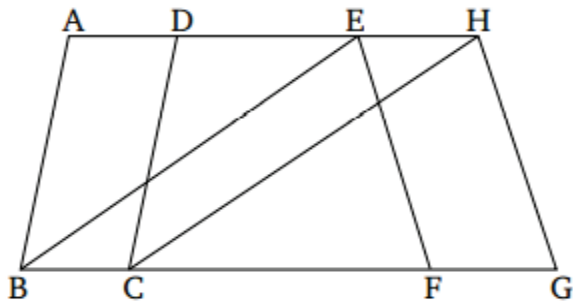
Dzogoe-ene siwo le zi ḁeka dzi eye le adu-adu ḁeka me sɔ kple wonḁewo



Mina ABCD, EBCF nanye dzogoe-ene siwo le zi BC dzi eye wo le adu-adu ɔka me na AF, BC;
 Ta me be ABCD sɔ kple dzogoe-ene EBCF
 Ta esi wonye be ABCD nye dzogoe-ene la,
 AD sɔ kple BC
 Le susu make ta
 EF sɔ kple BC,
 Le alea AD ha sɔ kple EF;
 Eye DE le wokata wo domi;
 Eyata AE kata sɔ kple DF kata
 Gake AB ha sɔ kple DC;
 Eyata to evea EA, AB wo sɔ kple to eve FD, DC
 Eye dzogoe-ene FDC sɔ kple dzogoe-ene EAB
 Egodo tɔ kple eme tɔ
 Eyata et EB sɔ kple zi FC,
 Eye dzogoe-ene EAB asɔ kple dzogoe-ene FDC
 Mina wo aɔe DGE tso wo me;
 Eyata trapezium ABGD si kpɔtɔ sɔ kple trapezium EGCF si kpɔtɔ
 Mina wo atsɔ dzogoe-ene GBC akpe ɔka wo nu;
 Eyata dzogoe-ene ABCD kata sɔ kple dzogoe-ene EBCF kata
 Eyata etc

Proposition 36

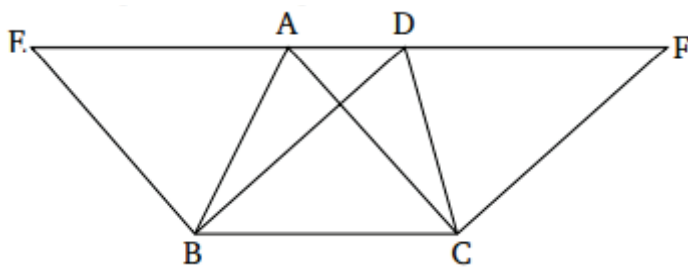
Dzogoe-ene siwo le zi sɔsɔewo dzi eye wo le adu-adu ɔka me sɔ kple wonɔewo



Mina ABCD, EFGH nanye dzogoe-ene siwo le zi sosoewo BC, FG dzi eye wo le adu-adu ɔka me AH, BG;
 Me be Dzogoe-ene ABCD so kple EFGH
 Ta mina mia tsã BE, CH
 Ke esi wonye be BC so kple FG,
 Eye FG so kple EH,
 BC ha so kple EH
 Gake wo zo adu-adu ha
 Eye EB, HC tsã wo;
 Gake fli-dzodzoe si fli-dzodzoe soso kple esiwo zozom adu-adu tsãm[tso wo fe sefewo dzi] le akpa ɔka me wo so eye wo zo adu-adu
 Eyata EBCH nye dzogoe-ene
 Eye wo so kple ABCD;
 Elabena efe zi BC so kpli, eye wo le adu-adu ɔka me kple BC, AH
 Le susu sia ke ta EFGH so kple EBCH;
 Le ale be dzogoe-ene ABCD ha so kple EFGH
 Eyata etc

Proposition 37

Dzogoe-etɔ siwo le zi ɔka dzi eye le adu-adu ɔka me, so kple wonɔewo

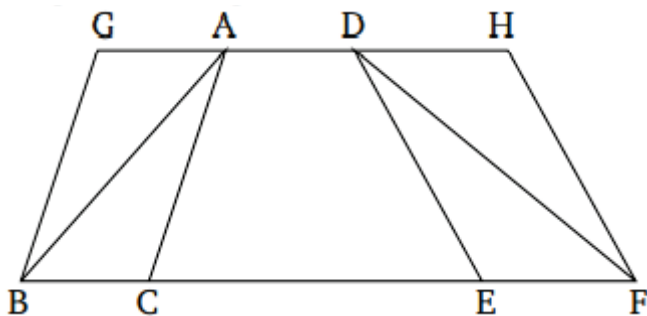


Mina ABC, DBC nanye dzogoe-etɔ siwo le zi ɔka BC dzi eye wo le adu-adu ɔka me AD, BC
 Me be dzogoe-etɔ ABC so kple dzogoe-etɔ DBC

Mina mia ta AD tē le akpa eveawo me E, F;
 To B me la, mina mia ta BE wo azo adu-adu na CA
 Eye to C me la, mina mia ta CF wo azo adu-adu na BD
 Ke tata qesiaqē EBCA, DBCF nye dzogoe-ene;
 Eye wo so, elabena wo le zi qēka BC dzi eye wo le adu-adu qēka me BC, EF
 Ga kpe qe enu la dzogoeme ABC nye dzogoe-ene EBCA fe afā;
 Ta afa-fli AB mā eme qe eve
 (Gake nusi wo so fe afawo so kple wonɔewo)
 Eyata dzogoe-etɔ̃ ABC so kple dzogoe-etɔ̃ DBC
 Eyata etc

Proposition 38

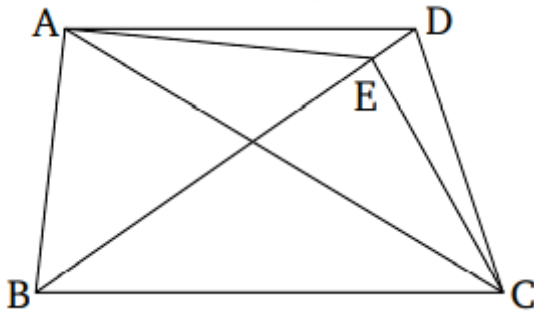
Dzogoe-etɔ̃ siwo le zi soɔewo dzi eye wo le adu-adu qēka ha me so kple wonɔewo



Mina ABC, DEF nanye dzogoe-etɔ̃ siwo le zi soɔewo BC,EF dzi
 Eye wo le adu-adu qēka me BF, AD;
 Me be dzogoe-etɔ̃ ABC so kple dzogoe-etɔ̃ DEF
 Ta mina wo ata AD tē qe akpa eveawo me wo asē qe G,H;
 To B me la mina wo ata BG wo azo adu-adu na CA,
 Eye to F me la mina wo ata FH wo azo adu-adu na DE.
 Ke tata qesiaqē GB, CA, DEFH wonye dzogoe-ene;
 Eye GBCA so kple DEFH;
 Elabena wo le zi soɔewo BC, EF dzi
 Eye le adu-adu qēka BF, GH me
 Tso kpe qe enu la, dzogoe-etɔ̃ ABC nye dzogoe-ene GBCA fe afa;
 Elabena afa-fli AB mā eme qe eve
 Eye dzogoe-etɔ̃ FED nye dzogoe-ene DEFH fe afa;
 Elabena afa-fli DF ma eme qe eve
 (Gake nusi wo so fe afawo so kple wonɔewo)
 Eyata dzogoe-etɔ̃ ABC so kple dzogoe-etɔ̃ DEF
 Eyata etc

Proposition 39

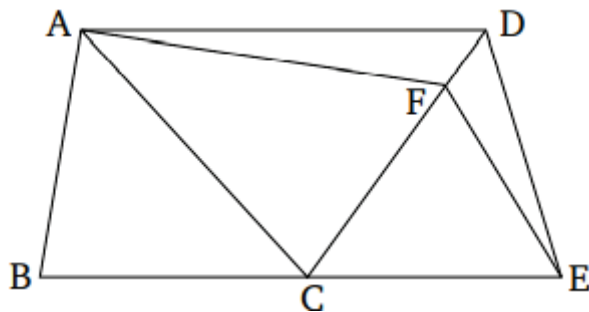
Dzogoe-etĩ sɔsɔewo siwo le zi ɔka dzi eye wo le to ɔka dzi wo ha wo le adu-adu ɔka me



Mina ABC, DBC nanye dzogoe-etĩ sɔsoewo siwo le zi ɔka BC dzi
 Eye wo le efe to ɔka me;
 (Ta me be wo le adu-adu ɔka hã me)
 Eye(Ta) mina mia tsã AD;
 Me be AD zɔ adu-adu na BC
 Ke ne me le eme o la, mina mia ta AE wo ato tefe A me wo azɔ adu-adu na fli-dzɔdzɔe BC
 Eye mina mia tsã EC
 Eyata dzogoe-etĩ ABC sɔ kple dzogoe-etĩ EBC
 Elabena ele zi ɔka BC dzi kpli eye le adu-adu ɔka me
 Gake ABC sɔ kple DBC;
 Eyata DBC hã sɔ kple EBC
 Gãto na sueto : si me atɛnu anɔ eme o
 Eyata AE me zɔ adu-adu na BC o
 Nenemake mi atɛnu aɔi fia be fli aɔke o ke bon AD zɔ adu-adu ne;
 Eyata AD zɔ adu-adu na BC
 Eyata etc

Proposition 40

Dzogoe-etĩ sɔsɔewo siwo le zi sɔsɔewo dzi eye wole to ɔka dzi wo ha wo le adu-adu ɔka me

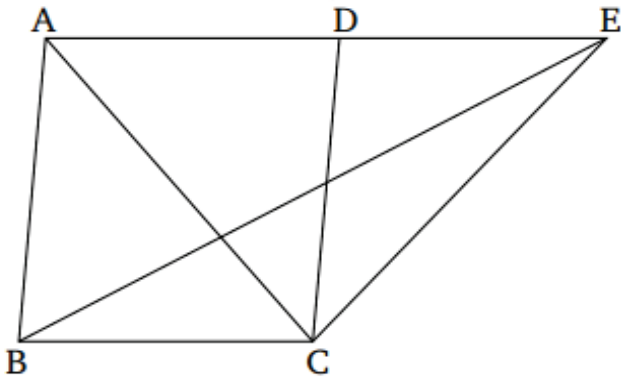


Mina ABC, CDE nanye dzogoe-etĩ sɔsoewo le zi sɔsoewo BC, CE dzi eye wo le to ɔka dzi

Me be wo le adu-adu ɔka ha me
 Ta mina mia tsã AD
 Me be AD zɔ adu-adu na BE
 Ke ne me le eme o la, mina mia ta AF to A me wo azɔ adu-adu na BE
 Eye mina mia tsã FE
 Eyata dzogoe-etɔ̃ ABC sɔ kple dzogoeeme anɔ FCE;
 Elabena wo le zi sɔsoewo dzi BC, CE eye wo le adu-adu ɔka me BE, AF
 Gake dzogoe-etɔ̃ ABC sɔ kple dzogoe-etɔ̃ FCE
 Gãto na sueto: si me aterɔ anɔ eme o
 Eyata AF me zɔ adu-adu na BE o
 Nenemake mi aterɔ aɔi fia be fli-dzɔdzɔe aɔeke me zɔ adu-adu na BE o ke AD ko
 Eyata AD zɔ adu-adu na BE
 Eyata etc

Proposition 41

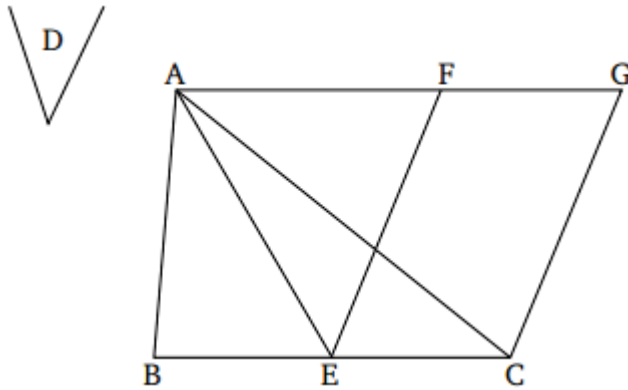
Ne zi ɔka le dzogoe-ene kple dzogoe-etɔ̃ si eye wo le adu-adu ɔka me la, dzogoe-enea anye dzogoe-etɔ̃ teƑe (zi gbɔ zi) eve



Ta mina zi ɔka BC na nɔ dzogoe-ene ABCD si kple dzogoe-etɔ̃ EBC,
 eye mina wo anɔ adu-adu ɔka BC, AE me;
 Me be dzogoe-ene ABCD nye dzogoe-etɔ̃ BEC teƑe eve
 Ta mina mia tsã AC
 Ke dzogoe-etɔ̃ ABC sɔ kple dzogoe-etɔ̃ EBC;
 Ta ele zi ɔka BC dzi kpli eye wo le adu-adu ɔka me na BC, AE
 Gake dzogoe-ene ABCD nye dzogoe-etɔ̃ ABC teƑe eve
 Elabena afa-fli AC mã eme ɔe eve le ale be dzogoe-ene ABCD ha nye dzogoe-etɔ̃ EBC teƑe eve
 Eyata etc.

Proposition 42

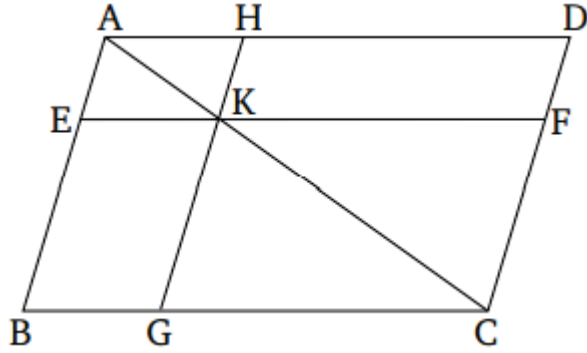
Wo ata dzogoe-ene si so kple dzogoe-etɔ̃ ɔ dzogoe-me-dɔ̃abui si wo na mi me



Mina ABC nanye dzogoe-etɔ̃ si wo na mi,
 Eye D nanye dzogoe-me-dɔ̃abui;
 Ta edze be mia ta dzogoe-ene si so kple dzogoe-etɔ̃ ABC ɔ dzogoe-me-dɔ̃abui D me
 Mina wo amã BC me ɔ E, eye mina wo atsã AF;
 Le fli-dzɔdzɔe EC dzi la, eye le teƒe E si le edzi la, mina wo ata dzogoe-me CEF wo aso kple
 dzogoe-me D;
 To A me la, mina wo ata AG wo azo adu-adu na EC
 Eye to C me la, mina wo ata CG wo azo adu-adu na EF
 Ta FECG nye dzogoe-ene
 Eye esi wonye be BE so kple EC la
 Dzogoe-etɔ̃ ABE ha so kple dzogoe-etɔ̃ AEC
 Elabena wo le zi ɔka BE, EC dzi kple adu-adu ɔka me na BC, AG;
 Eyata dzogoe-etɔ̃ ABC nye dzogoe-etɔ̃ AEC teƒe eve
 Gake dzogoe-ene FECG ha nye dzogoe-etɔ̃ AEC teƒe eve elabena zi ɔka le wo domi eye wo le
 adu-adu ɔka me kpli;
 Eyata dzogoe-ene FECG so kple dzogoe-etɔ̃ ABC
 Eye eƒe dzogoe-me CEF so kple dzogoe-me si wo na mi D
 Eyata wo ta dzogoe-ene FECG wo so kple dzogoe-etɔ̃ ABC le dzogoe-etɔ̃ CEF me sis ɔ kple D

Proposition 43

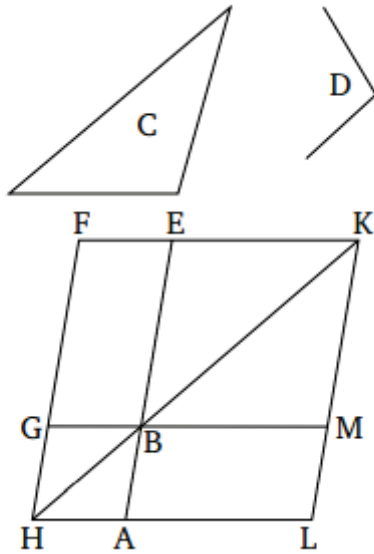
Le dzogoe-ene ɔesiade me la, ne wo ta adu-adu fli ɔ eme la, dzogoe-ene si le afa-flia te ƒe
 emiame aso kple dzogoe-ene si le afa-flia tame ƒe ɔsime



Mina ABCD na nye dzogoe-ene, eye AC na nye efe afa-fli;
 Eye le AC nu la, mina EH, FG na nye dzogoe-enewo, eye BK, KD na nye esiwo nye d̄eka;
 Me be akpa BK s̄o kple akpa KD.
 Ke esi wonye be ABCD nye dzogoe-ene, eye AC nye efe afa-fli la,
 Dzogoe-et̄s̄o ABC s̄o kple dzogoe-et̄s̄o ACD
 Ake esi wonye EH nye dzogoe-ene, eye AK nye efe afa-flia,
 Dzogoe-et̄s̄o AEK s̄o kple dzogoe-et̄s̄o AHK
 Le susu sia tutu ta
 Dzogoe-et̄s̄o KFC ha s̄o kple KGC
 Fifia esi wonye be dzogoe-et̄s̄o AEK kple KGC ts̄ots̄o kpe s̄o kple dzogoe-et̄s̄o AHK ts̄ots̄o kpe KFC
 Eye dzogoe-et̄s̄o ABC bliboa ha s̄o kple ADC bliboa;
 Eyata akpa BK si kp̄ot̄o s̄o kple akpa KD si kp̄ot̄o
 Eyata etc

Proposition 44

Na fli-dz̄dz̄e si wo na mi la, mia da dzogoe-ene si s̄o kple dzogoe-et̄s̄o d̄e enu le dzogoe-me-
 d̄iabui a d̄e me



Mina AB nanye fli-dzɔdzɔe si wo na mi,
 C nanye dzogoe-etɔ si wo na mi,
 Eye D nanye dzogoeme-dɔabui;
 Ta edze be mia da dzogoeme sis ɔ kple dzogoeme D me, dzogoe-ene sis ɔ kple dzogoe-etɔ C si
 wo na mi na fli-dzɔdzɔe AB

Mina wo ata dzogoe-ene BEFG wo asɔ kple dzogoe-etɔ C, le dzogoeme EBG me si sɔ kple D;
 Mina wo aɔe ɔe anyi le ale be BE le fli-dzɔdzɔe me kple AB;
 Mina wo ata FG to H me,
 Eye mina wo ata AH to A me wo azɔ adu-adu na BG alo EF
 Mina mia tsã HB
 Ke esi wonye be fli-dzɔdzɔe HF mu dze ɔe adu-adu fliwo AH, EF dzi la,
 Dzogoeme AHF, HFE wo sɔ kple dzogoeme-blasieke eve
 Eyata dzogoeme BHG, GFE wo le sue wu dzogoeme-blasieke eve;
 Eye fli-dzɔdzɔe siwo ta tẽ tso dzogoeme siwo le sue wu dzogoeme-blasieke eve do go;
 Eyata HB, FE, ne wo ta wo tẽ la, wo ado go
 Mina wo ata wo eye wo ado go le K;
 To tefe K me la, mina mia a KL wo azɔ adu-adu na EA alo FH,
 Eye mina wo ata HA, GB wo ayi tefe L, M
 Ta HLKF nye dzogoe-ene
 HK nye efe afa-fli,
 Eye AG, ME wonye dzogoe-enewo eye LV, BF si wo yɔyɔm be complementawo lw HK nuti;
 Eyata LB sɔ kple BF
 Gake BF sɔ kple dzogoe-etɔ C;
 Eyata LB ha sɔ kple C
 Eye esi wonye be dzogoeme GBE sɔ kple dzogoeme ABM,

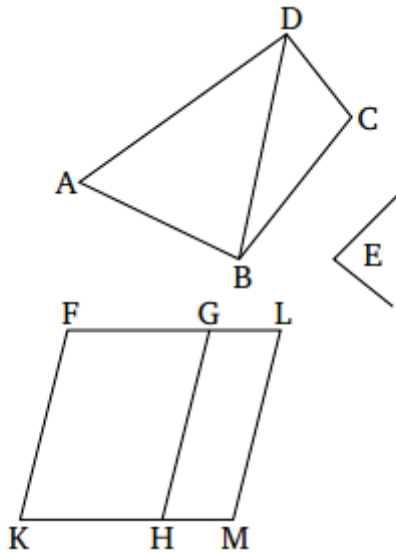
Esi dzogoeme GBE sɔ kple D

Dzogoeme ABM ha sɔ kple dzogoeme D

Eyata dzogoe-ene LB sɔ kple dzogoeme C si wo na mi – wo dae dɛ fli-dzɔdzɔe AB dzi, le dzogoeme ABM me sis ɔ kple D.

Proposition 45

Wo ata, le dzogoeme-blasieke aɛ me, dzogoe-ene si sɔ kple tata si fli dzɔdzɔe-ɔiabui si wo na mi



Mina ABCD nanye tata dzɔdzɔe si wo na mi eye E nanye dzogoeme-blasieke si wo na mi
Ta edze be mia ta dzogoe-ene si sɔ kple tata si fli dzɔdzɔe-ɔiabui ABCD dɛ dzogoeme si wo na mi
me

Mina mia tsã DB, eye mina mia ta dzogoe-ene FH wo asɔ kple dzogoe-etɔ̃ ABD, le dzogoeme
HKF me si sɔ kple E;

Mina dzogoe-ene GM n asɔ kple dzogoe-etɔ̃ DBC eye wo adae dɛ fli-dzɔdzɔe GH dzi le
dzogoeme GHM me si sɔ kple E

Ke esi wonye be dzogoeme E sɔ kple dzogoeme HKF, GHM domano ɔesiade la,
Dzogoeme HKF ha sɔ kple dzogoeme GHM

Mina mia tsɔ dzogoeme KHG akpe dɛ wo nu;

Eyata dzogoeme FKH, KHG wo sɔ kple dzogoeme KHG, GHM

Gake dzogoeme FKH, KHG wo sɔ kple dzogoeme-blasieke eve;

Eyata dzogoeme KHG, GHM wo ha wo sɔ kple dzogoeme-blasieke eve

Ta kple fli-dzɔdzɔe GH, eye le tefe H si le edzi, fli-dzɔdzɔe eve si wo me mb anyi dɛ to ɔka dzi o
na dzogoeme siwo dze ngo dɛ wonɔewo sɔ kple dzogoeme-blasieke eve;

Eyata KH le fli-dzɔdzɔe me kple HM

Eye esi wonye be fli-dzɔdzɔe HG mu dze adu-adu fliwo KM, FG dzi la, dzogoeme.....MHG,HGF wo sɔ kple wonɔewo

Mina wo atsɔ dzogoeme HGL akpe dɛ wo nu

Eyata dzogoeme MHG, HGL wo sɔ kple dzogoeme-blasieke eve HGF, HGL

Gake dzogoeme MHG, HGL wo sɔ kple dzogoeme-blasieke eve;

Eyata dzogoeme HGF, HGL wo ha wo sɔ kple dzogoeme-blasieke eve

Eyata FG nye fli-dzɔdzɔe kple GL

Eye esi wonye be FK sɔ kple HG

Eye wo zɔ adu-adu kpli la

Eye HG kple ML ha la

KF ha sɔ kple ML eye wo zɔ adu-adu kple

Eye fli-dzɔdzɔe KM, FL tsã wo [le wo fe sefowo dzi];

Eyata KM, FL wo ha wo sɔ kpli eye wo zɔ adu-adu

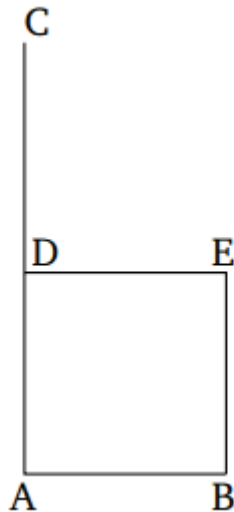
Eyata KFLM nye dzogoe-ene

Eye esi wonye be dzogoeme ABD sɔ kple dzogoe-ene FH, eye DBC kple GM, tata si fli dzɔdzɔe-dɔɔɔɔwɔ wɔ blibo ABCD sɔ kple dzogoe-ene KFLM bliboa.

Eyata wo ta dzogoe-ene KFLM wo sɔ kple tata si fli dzɔdzɔe-dɔɔɔɔwɔ wɔ ABCD si wo na mi; le dzogoeme FKM me si sɔ kple dzogoeme E si wo na mi

Proposition 46

Mia ta axa-ene dɛ fli-dzɔdzɔe si wo na mi dzi



Mina AB nanye fli-dzɔdzɔe si wo na mi

Ta edze be mia ta axa-ene dɛ fli-dzɔdzɔe AB dzi

Mina wo ata AC wo anɔ dzogoeme-blasieke me na fli-dzɔdzɔe AB tso tefe A si le edzi;

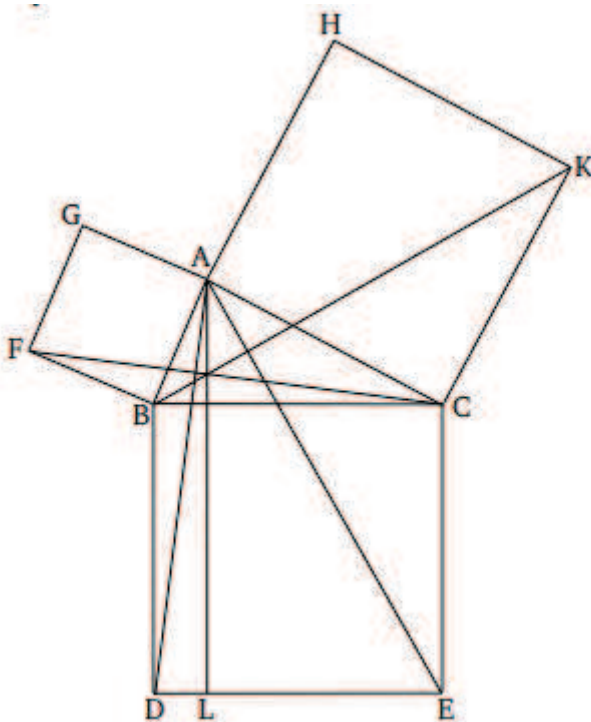
Eye mina mia wɔ AD wo asɔ kple AB;

To tefe D la, mina mia ta DE wo azɔ adu-adu na AB,

Eye to tefe B la, mina mia ta BE wo azo adu-adu na AD
 Eyata ADEB nye dzogoe-ene;
 Eyata AB so kple DE, eye AD kple BE
 Gake AB so kple AD;
 Eyata fli-dzodzoe enea BA, AD, DE, EB wo so kple wonoewo
 Eyata dzogoe-ene ADEB fe towo kata so
 Me ga gblɔ be enye dzogoeme-blasieke ha
 Ta esi wonye be fli AD mu dze adu-adu fli AB,DE dzi la,
 Dzogoeme BAD, ADE wo so kple dzogoeme-blasshieke eve
 Gake dzogoeme BAD nye dzogoeme-blasieke;
 Eyata dzogoeme AE ha nye dzogoeme-blasieke
 Eye le gbadzame siwo nye dzogoe-ene la, dzogoeme kple to siwo dze ngo wonoewo so kple
 wonoewo
 Eyata dzogoeme desiaɖe si dze ngo wonoewo ABE, BED ha nye dzogoeme-blasieke
 Eyata ADEB ha nye dzogoeme-blasieke
 Eye wo ɖi fia be etoawo so kple wonoewo
 Eyata enye axa-ene; eye wo tae ɖe fli-dzodzoe AB dzi

Proposition 47

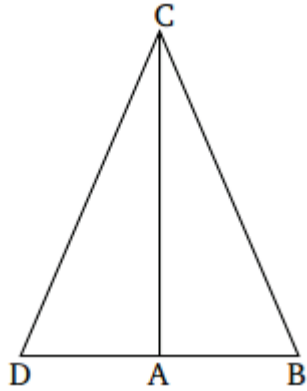
Le dzogoeme-blasieke dzogoe-etɔwo me la, fove si le to si dzogoeme-blasiekea hem ve so kple
 fove siwo le to siwo me dzogoeme-blasiekea le



Mina ABC nanye dzogoeme-blasieke dzogoe-etĩ si fe dzogoeme-blasieke nye BAC
 Me be fove si le BC dzi sɔ kple fove si le BA, AC dzi
 Ke mina mia ta axa-ene BDEC ɔ BC dzi, eye ɔ BA,
 AC dzi axane GB, HC;
 To A me la mina mia ta AL wo azɔ adu-adu na BD alo CE,
 Eye mina mia tsã AD, FC
 Ta esi wonye be dzogoeme BAC, BAG nye dzogoeme-blasiekewo la
 Eva dzɔ be kple fli-dzɔdzɔe BA, eye le teƒe A si le edzi la, fli-dzɔdzɔe eve AC, AG si wo me mlɔ
 anyi ɔ to ɔka dzi o, na dzogoeme si le woƒe akpawo dzi sɔ kple dzogoeme-blasieke eve;
 Eyata CA le fli-dzɔdzɔe me kple AG
 Le susu ma ke ta BA ha le fli-dzɔdzɔe kple AH
 Eye esi wonye be dzogoeme DBC sɔ kple dzogoeme FBA: elabena wokata wonye dzogoeme-
 blasiekewo
 Mina mia tsɔ dzogoeme ABC akpe ɔ wo nu;
 Eyata dzogoeme DBA bliboa sɔ kple FBC bliboa
 Eye esi wonye be DB sɔ kple BC, eye FB kple BA,
 To eveawo AB, BD wo sɔ kple to eveawo FB, BC
 Eye dzogoeme ABD sɔ kple dzogoeme FBC
 Eyata zi AD sɔ kple zi FC
 Eye dzogoe-etĩ ABD sɔ kple dzogoe-etĩ FBC
 Fifia aɔka BL nye dzogoe-etĩ ABD teƒe eve, elabena zi ɔka le wo si BD eye wo le adu-adu ɔka
 me BD, AL
 Eye axa-ene GB nye dzogoe-etĩ FBC teƒe eve, elabena zi ɔka FB le wo domi eye wo le adu-adu
 ɔka FB, GC me (gake nusi wo sɔ teƒe eve sɔ kple wonɔewo)
 Eyata aɔka BL sɔ kple axa-ene GB
 Nenemake la, ne wo tsã AE, BK la, wo atenu aɔi fia be aɔka CL sɔ kple axa-ene HC;
 Eyata axa-ene BDEC kata sɔ kple axa-ene GB, HC
 Eye wo ta axa-ene BDEC ɔ BC dzi kple axa-ene GB, HC ɔ BA, AC dzi
 Eyata fove si le to BC sɔ kple fove si le to BA, AC
 Eyata etc

Proposition 48

Ne le dzogoe-etĩ me, fove si le to ɔka dzi sɔ kple to eve si wo kpɔɔ fe fove, dzogoeme si to
 siwo kpɔɔ wɔ anye dzogoeme-blasieke



Ta le dzogoe-etõ ABC me la, mina fove si le to ðeka BC na sò kple fove si le to BA, AC dzi;
 Me be dzogoeme BAC nye dzogoeme-blasieke
 Ta mina mia ta AD tso te fe A wo anò dzogoeme-blasieke me na fli-dzòdzòe AC,
 Mina mia wò AD wo asò kple BA,
 Eye mina mia tsã DC
 Esi wonye be DA sò kple AB
 Fove si le DA dzi ha sò kple fove si le AB dzi
 Mina mia tsò fove si le AC dzi akpe ðe wo nu;
 Eyata foe si le DA, AC dzi sò kple fove si le BA, AC dzi
 Gake fove si le DC dzi sò kple fove si le DA, AC dzi, elabena dzogoeme DAC nye dzogoeme-
 blasieke
 Eye fove si le BC dzi sò kple fove si le BA, AC dzi, elabena esia wo tsòe abe ele ene;
 Eyata fove si le DC dzi sò kple fove si le BC dzi
 Le ale be to DC ha sò kple to BC
 Eye esi wonye be DA sò kple AB, eye AC le wokata nuti la,
 To evea DA, AC sò kple to eve BA, AC;
 Eye zi DC sò kple zi BC
 Eyata dzogoeme DAC sò kple dzogoeme BAC
 Gake dzogoeme DAC nye dzogoeme-blasieke
 Eyata dzogoeme BAC nye dzogoeme-blasieke
 Eyata etc

References

Euclid, Densmore, D., & Heath, T. L. (2013). *Euclid's elements: All Thirteen books complete in one volume*. Green Lion Press.