



MOPHATO

3

BUKA YA
MOITHUTI

Platinum

Dikhoutu le Diroboto

Ditokole tsothle di sireleditswe. Ga go karolo ya kgatiso e, e e ka boelediawang, ya bolokwa mo mofuteng o o ka thlagiswang gape ka ona, kgotsa ya gaswa mo sebopegong sengwe le sengwe kgotsa ka mokgwa o o rileng (eleketeroniki, ka motšhine, ka kgatiso kgotsa ka mokgwa o mongwe o o sa dumeletsegeng) ntle le gore go bonwe tumelano e e kwadilweng fa fatshe ya mong wa ditshiamelo tse di sireleditsweng tsa bokwadi pele.

Fa o batla go rebolelwa tetla ya go ka gatisa lekgetlo le lengwe gape kgotsa go dirisa karolo nngwe le nngwe ya buka eno, o kopiwa gore o ikgolaganye le Sethlopha se se reboleanang ka Ditshwanelo le Tetla mo go 021 532 6000 kgotsa ka go romela imeili mo go rightsgranting@mml.co.za. Go begela tshenyoy ya ditshwanelo tsa mokwadi, tsweetswee romela imeili go copyright@mml.co.za.

Kgatiso ya 1 ka 2025

ISBN 978-1-834-95314-4
ePDF ISBN 978-1-834-98647-0

Mophasalatsi Whitley Makhari
Morulaganyimogolo Georgia Mehl
Mothalo wa bokwantle ka MML Visual Design
Mothalo wa buka ka MML Visual Design
Botaki ka AJ Erasmus, Angela Browning, Illana Dillon, LT Design Worx, MML Visual Design
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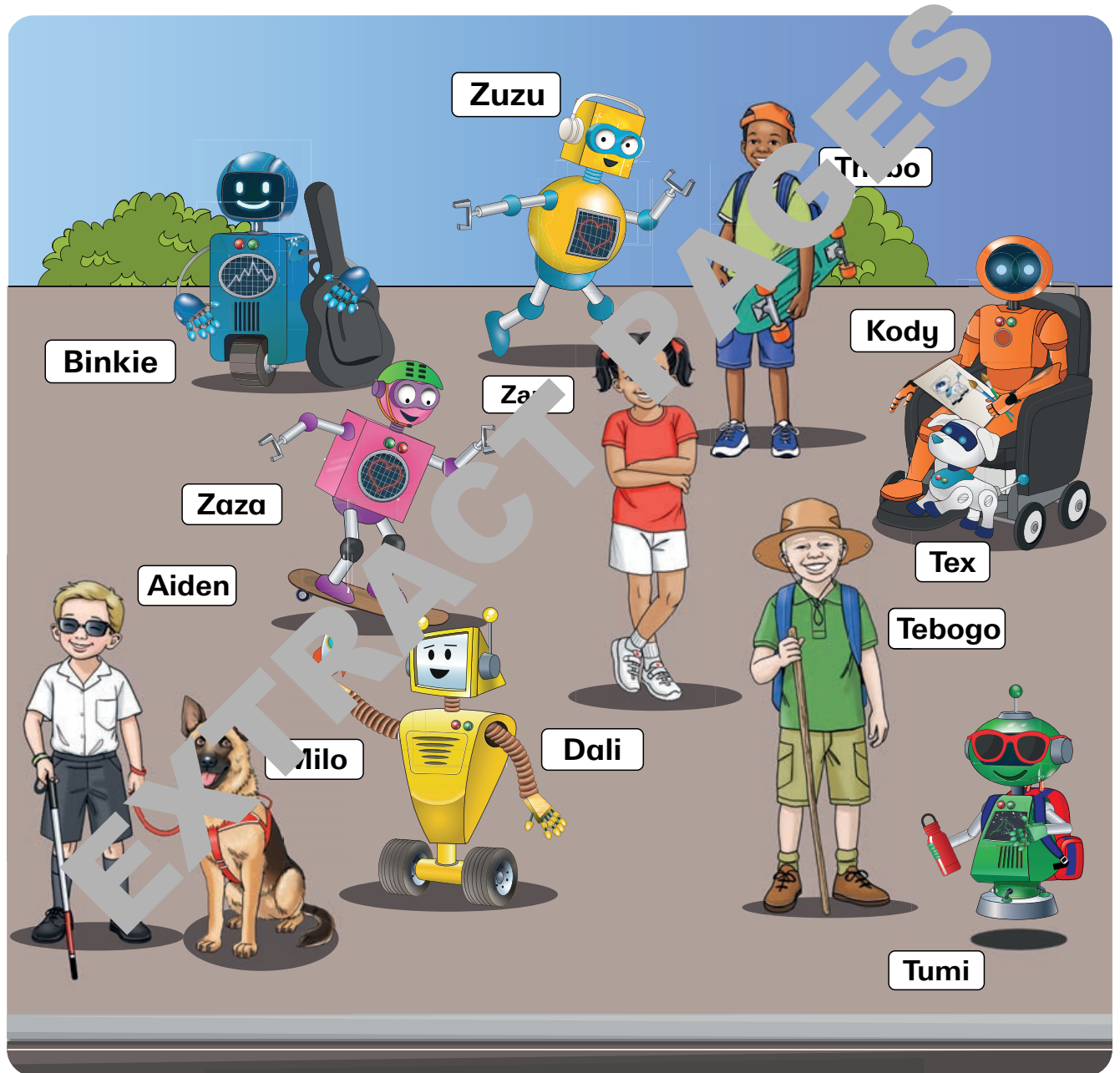
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L.83p, L.83q, L.83r, L.83s, L.83t, L.83u, L.83v, L.83w, L.83x, L.83y, L.83z, L.84a, L.84b, L.84c, L.84d, L.84e, L.84f, L.84g, L.84h, L.84i, L.84j, L.84k, L.84l, L.84m, L.84n, L.84o, L.84p, L.84q, L.84r, L.84s, L.84t, L.84u, L.84v, L.84w, L.84x, L.84y, L.84z, L.85a, L.85b, L.85c, L.85d, L.85e, L.85f, L.85g, L.85h, L.85i, L.85j, L.85k, L.85l, L.85m, L.85n, L.85o, L.85p, L.85q, L.85r, L.85s, L.85t, L.85u, L.85v, L.85w, L.85x, L.85y, L.85z, L.86a, L.86b, L.86c, L.86d, L.86e, L.86f, L.86g, L.86h, L.86i, L.86j, L.86k, L.86l, L.86m, L.86n, L.86o, L.86p, L.86q, L.86r, L.86s, L.86t, L.86u, L.86v, L.86w, L.86x, L.86y, L.86z, L.87a, L.87b, L.87c, L.87d, L.87e, L.87f, L.87g, L.87h, L.87i, L.87j, L.87k, L.87l, L.87m, L.87n, L.87o, L.87p, L.87q, L.87r, L.87s, L.87t, L.87u, L.87v, L.87w, L.87x, L.87y, L.87z, L.88a, L.88b, L.88c, L.88d, L.88e, L.88f, L.88g, L.88h, L.88i, L.88j, L.88k, L.88l, L.88m, L.88n, L.88o, L.88p, L.88q, L.88r, L.88s, L.88t, L.88u, L.88v, L.88w, L.88x, L.88y, L.88z, L.89a, L.89b, L.89c, L.89d, L.89e, L.89f, L.89g, L.89h, L.89i, L.89j, L.89k, L.89l, L.89m, L.89n, L.89o, L.89p, L.89q, L.89r, L.89s, L.89t, L.89u, L.89v, L.89w, L.89x, L.89y, L.89z, L.90a, L.90b, L.90c, L.90d, L.90e, L.90f, L.90g, L.90h, L.90i, L.90j, L.90k, L.90l, L.90m, L.90n, L.90o, L.90p, L.90q, L.90r, L.90s, L.90t, L.90u, L.90v, L.90w, L.90x, L.90y, L.90z, L.91a, L.91b, L.91c, L.91d, L.91e, L.91f, L.91g, L.91h, L.91i, L.91j, L.91k, L.91l, L.91m, L.91n, L.91o, L.91p, L.91q, L.91r, L.91s, L.91t, L.91u, L.91v, L.91w, L.91x, L.91y, L.91z, L.92a, L.92b, L.92c, L.92d, L.92e, L.92f, L.92g, L.92h, L.92i, L.92j, L.92k, L.92l, L.92m, L.92n, L.92o, L.92p, L.92q, L.92r, L.92s, L.92t, L.92u, L.92v, L.92w, L.92x, L.92y, L.92z, L.93a, L.93b, L.93c, L.93d, L.93e, L.93f, L.93g, L.93h, L.93i, L.93j, L.93k, L.93l, L.93m, L.93n, L.93o, L.93p, L.93q, L.93r, L.93s, L.93t, L.93u, L.93v, L.93w, L.93x, L.93y, L.93z, L.94a, L.94b, L.94c, L.94d, L.94e, L.94f, L.94g, L.94h, L.94i, L.94j, L.94k, L.94l, L.94m, L.94n, L.94o, L.94p, L.94q, L.94r, L.94s, L.94t, L.94u, L.94v, L.94w, L.94x, L.94y, L.94z, L.95a, L.95b, L.95c, L.95d, L.95e, L.95f, L.95g, L.95h, L.95i, L.95j, L.95k, L.95l, L.95m, L.95n, L.95o, L.95p, L.95q, L.95r, L.95s, L.95t, L.95u, L.95v, L.95w, L.95x, L.95y, L.95z, L.96a, L.96b, L.96c, L.96d, L.96e, L.96f, L.96g, L.96h, L.96i, L.96j, L.96k, L.96l, L.96m, L.96n, L.96o, L.96p, L.96q, L.96r, L.96s, L.96t, L.96u, L.96v, L.96w, L.96x, L.96y, L.96z, L.97a, L.97b, L.97c, L.97d, L.97e, L.97f, L.97g, L.97h, L.97i, L.97j, L.97k, L.97l, L.97m, L.97n, L.97o, L.97p, L.97q, L.97r, L.97s, L.97t, L.97u, L.97v, L.97w, L.97x, L.97y, L.97z, L.98a, L.98b, L.98c, L.98d, L.98e, L.98f, L.98g, L.98h, L.98i, L.98j, L.98k, L.98l, L.98m, L.98n, L.98o, L.98p, L.98q, L.98r, L.98s, L.98t, L.98u, L.98v, L.98w, L.98x, L.98y, L.98z, L.99a, L.99b, L.99c, L.99d, L.99e, L.99f, L.99g, L.99h, L.99i, L.99j, L.99k, L.99l, L.99m, L.99n, L.99o, L.99p, L.99q, L.99r, L.99s, L.99t, L.99u, L.99v, L.99w, L.99x, L.99y, L.99z, L.100a, L.100b, L.100c, L.100d, L.100e, L.100f, L.100g, L.100h, L.100i, L.100j, L.100k, L.100l, L.100m, L.100n, L.100o, L.100p, L.100q, L.100r, L.100s, L.100t, L.100u, L.100v, L.100w, L.100x, L.100y, L.100z, L.101a, L.101b, L.101c, L.101d, L.101e, L.101f, L.101g, L.101h, L.101i, L.101j, L.101k, L.101l, L.101m, L.101n, L.101o, L.101p, L.101q, L.101r, L.101s, L.101t, L.101u, L.101v, L.101w, L.101x, L.101y, L.101z, L.102a, L.102b, L.102c, L.102d, L.102e, L.102f, L.102g, L.102h, L.102i, L.102j, L.102k, L.102l, L.102m, L.102n, L.102o, L.102p, L.102q, L.102r, L.102s, L.102t, L.102u, L.102v, L.102w, L.102x, L.102y, L.102z, L.103a, L.103b, L.103c, L.103d, L.103e, L.103f, L.103g, L.103h, L.103i, L.103j, L.103k, L.103l, L.103m, L.103n, L.103o, L.103p, L.103q, L.103r, L.103s, L.103t, L.103u, L.103v, L.103w, L.103x, L.103y, L.103z, L.104a, L.104b, L.104c, L.104d, L.104e, L.104f, L.104g, L.104h, L.104i, L.104j, L.104k, L.104l, L.104m, L.104n, L.104o, L.104p, L.104q, L.104r, L.104s, L.104t, L.104u, L.104v, L.104w, L.104x, L.104y, L.104z, L.105a, L.105b, L.105c, L.105d, L.105e, L.105f, L.105g, L.105h, L.105i, L.105j, L.105k, L.105l, L.105m, L.105n, L.105o, L.105p, L.105q, L.105r, L.105s, L.105t, L.105u, L.105v, L.105w, L.105x, L.105y, L.105z, L.106a, L.106b, L.106c, L.106d, L.106e, L.106f, L.106g, L.106h, L.106i, L.106j, L.106k, L.106l, L.106m, L.106n, L.106o, L.106p, L.106q, L.106r, L.106s, L.106t, L.106u, L.106v, L.106w, L.106x, L.106y, L.106z, L.107a, L.107b, L.107c, L.107d, L.107e, L.107f, L.107g, L.107h, L.107i, L.107j, L.107k, L.107l, L.107m, L.107n, L.107o, L.107p, L.107q, L.107r, L.107s, L.107t, L.107u, L.107v, L.107w, L.107x, L.107y, L.107z, L.108a, L.108b, L.108c, L.108d, L.108e, L.108f, L.108g, L.108h, L.108i, L.108j, L.108k, L.108l, L.108m, L.108n, L.108o, L.108p, L.108q, L.108r, L.108s, L.108t, L.108u, L.108v, L.108w, L.108x, L.108y, L.108z, L.109a, L.109b, L.109c, L.109d, L.109e, L.109f, L.109g, L.109h, L.109i, L.109j, L.109k, L.109l, L.109m, L.109n, L.109o, L.109p, L.109q, L.109r, L.109s, L.109t, L.109u, L.109v, L.109w, L.109x, L.109y, L.109z, L.110a, L.110b, L.110c, L.110d, L.110e, L.110f, L.110g, L.110h, L.110i, L.110j, L.110k, L.110l, L.110m, L.110n, L.110o, L.110p, L.110q, L.110r, L.110s, L.110t, L.110u, L.110v, L.110w, L.110x, L.110y, L.110z, L.111a, L.111b, L.111c, L.111d, L.111e, L.111f, L.111g, L.111h, L.111i, L.111j, L.111k, L.111l, L.111m, L.111n, L.111o, L.111p, L.111q, L.111r, L.111s, L.111t, L.111u, L.111v, L.111w, L.111x, L.111y, L.111z, L.112a, L.112b, L.112c, L.112d, L.112e, L.112f, L.112g, L.112h, L.112i, L.112j, L.112k, L.112l, L.112m, L.112n, L.112o, L.112p, L.112q, L.112r, L.112s, L.112t, L.112u, L.112v, L.112w, L.112x, L.112y, L.112z, L.113a, L.113b, L.113c, L.113d, L.113e, L.113f, L.113g, L.113h, L.113i, L.113j, L.113k, L.113l, L.113m, L.113n, L.113o, L.113p, L.113q, L.113r, L.113s, L.113t, L.113u, L.113v, L.113w, L.113x, L.113y, L.113z, L.114a, L.114b, L.114c, L.114d, L.114e, L.114f, L.114g, L.114h, L.114i, L.114j, L.114k, L.114l, 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L.133s, L.133t, L.133u, L.133v, L.133w, L.133x, L.133y, L.133z, L.134a, L.134b, L.134c, L.134d, L.134e, L.134f, L.134g, L.134h, L.134i, L.134j, L.134k, L.134l, L.134m, L.134n, L.134o, L.134p, L.134q, L.134r, L.134s, L.134t, L.134u, L.134v, L.134w, L.134x, L.134y, L.134z, L.135a, L.135b, L.135c, L.135d, L.135e, L.135f, L.135g, L.135h, L.135i, L.135j, L.135k, L.135l, L.135m, L.135n, L.135o, L.135p, L.135q, L.135r, L.135s, L.135t, L.135u, L.135v, L.135w, L.135x, L.135y, L.135z, L.136a, L.136b, L.136c, L.136d, L.136e, L.136f, L.136g, L.136h, L.136i, L.136j, L.136k, L.136l, L.136m, L.136n, L.136o, L.136p, L.136q, L.136r, L.136s, L.136t, L.136u, L.136v, L.136w, L.136x, L.136y, L.136z, L.137a, L.137b, L.137c, L.137d, L.137e, L.137f, L.137g, L.137h, L.137i, L.137j, L.137k, L.137l, L.137m, L.137n, L.137o, L.137p, L.137q, L.137r, L.137s, L.137t, L.137u, L.137v, L.137w, L.137x, L.137y, L.137z, L.138a, L.138b, L.138c, L.138d, L.138e, L.138f, L.138g, L.138h, L.138i, L.138j, L.138k, L.138l, L.138m, L.138n, L.138o, L.138p, L.138q, L.138r, L.138s, L.138t, L.138u, L.138v, L.138w, L.138x, L.138y, L.138z, L.139a, L.139b, L.139c, L.139d, L.139e, L.139f, L.139g, L.139h,

Amogelesega

Morutwana yo o rategang

Re a go amogela mo bukeng eno ya thuto e e kgatlang thata! O tšile go kopana le batsayakarolo ba ba gakgamatsang; fela jaaka fa motsayakarolo mongwe le mongwe a kgethegile ka tsela ya gagwe, le wena o kgethegile fela jalo!



Ipaakanyetse go ithuta, go tshameka le go tlhama le ditsala tsa gago.

Itumelele go ithuta.

Tsela ya go dirisa bukantswe e

Fa o bona	Go raya gore:
	nako ya go dira le tsala ya me
	nako ya go dira jaaka setlhophamo
	nako ya go dirisa diatlhama me le boboko jwa me
	nako ya go thama go kwala
	nako ya go tshama ka dilo
	nako ya go dirisa boboko le mona-
	ke nako ya go tsamaisa mmele wa me
	nako ya go kwala khoutu
	go kwala khoutu ka go tshameka

Go tlhloganya kgopolo ya ntlha

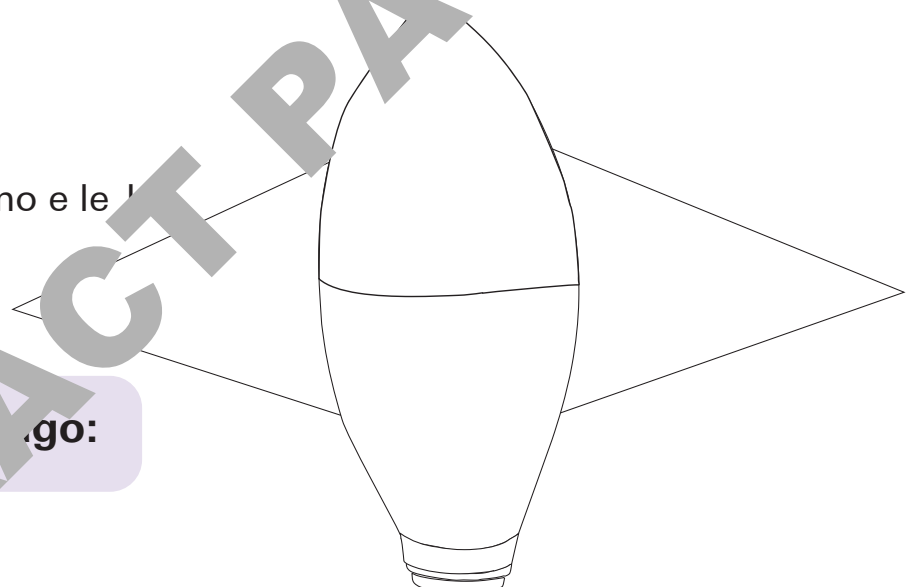
Dira rokete:

O tla tlhoka:

- Dithupa tsa X 4 (tse e ka nna dithupa tsa a) aog tse di pentilweng, ditlhaka, khateboto kgotsa mpiri e e mebalabala e e segilweng go nna methala. Sengwe le sengwe se se bonolo le se se leng teng mo go wena.
- bohobidu e le 1
- namune e le 1
- botala jwa legodimo e le 1
- serolwana se le 1
- sekgomaretsi

Go dira rokete ya gago:

- Latedina rokete.
- Seta rokete e e latedisitsweng.
- Tshisa rokete ya gago mmala.
 - Kwa godimo – bohobidu.
 - Kwa tlase – botala jwa legodimo.
 - Ka fa mojang – mmala wa namune.
 - Mo molemeng – bosetlha.
- Kgomaretsa.

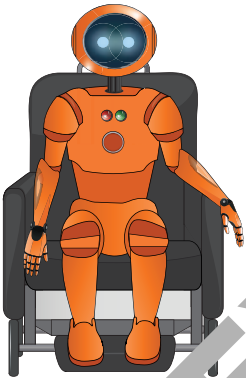


Paka 1



Beke 1: Fa e le gore? Morago eng?	1
Beke 2: Ke ga me fela.....	6
Beke 3: A re thale.....	10
Beke 4: Maikutlo ke eng?	15
Beke 5: Sedirisiwa sa me sa Thuso ya ntlha	20
Beke 6: Ditshwetso tse di itekanetseng	31
Beke 7: A re age koloï.....	36
Beke 8: Mokwalo wa me wa dijitala	43
Beke 9: Ditshwanelo tsa gago le tsa m.....	50
Beke 10: Ke dira jang maikarabelo?.....	57

Paka 2



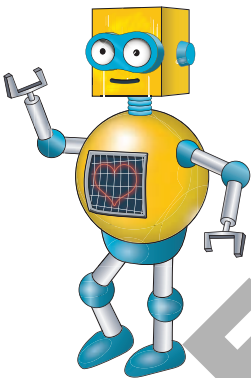
Beke 1: Ja dikhabohaetereite tse di itekanetseng	61
Beke 2: Ke tshwanetse go tloga	66
Beke 3: Diporoteine tse di siameng le dilo tse di dirilweng ka mašw.....	69
Beke 4: Ditšhaiso tse dintle.....	75
Beke 5: Mono se kaya eng?	80
Beke 6: Bothata ke eng?.....	85
Beke 7: Tsaya dikgato tse di latelang.....	90
Beke 8: Dikgato tsa botshelo	98
Beke 9: Rarabolola bothata jwa matlakala.....	107
Beke 10: Dirisa gape Dira sešwa Fokotsa	115

Paka 3



Beke 1: Batho ba ba re thusang.....	121
Beke 2: Go gatisa dipaterone.....	128
Beke 3: Go lwantsha kgotlhelego.....	138
Beke 4: Go dira sejana sa paper mâché.....	145
Beke 5: Go kopolola ka Braille.....	152
Beke 6: Kgabisa sekgamelo sa gago.....	158
Beke 7: Ka fao thekenoloji e fetogileng.....	168
Beke 8: Diroboto mo lefaufaung.....	174
Beke 9: Kwa sekgweng se sekgala.....	180
Beke 10: Go batla dikarolo tsa letsatsi.....	186

Paka 4



Beke 1: Dikumo le ditsamaiso.....	195
Beke 2: Diroboto mo tšhinyang.....	205
Beke 3: Diroboto tse diholosa.....	214
Beke 4: Go fetsa sepele ya gago.....	220
Beke 5: Go tšhaya setsuatsue.....	226
Beke 6: Go lekanya maemo a bosa.....	231
Beke 7: Go kwala khoutu – puo ya rona ya sephiri.....	237
Beke 8: Thekenoloji e a re thusa.....	244
Beke 9: Diphologolo tse di re thusang.....	250
Beke 10: Dinotshe tse di berekang thata.....	258

EXTRACT PAGES

Fa e le gore? Morago eng?

C1,
C2

Ke Letsatsi la Dipapadi mo sekolong.

Re dira ditshwetso ka dinako tsothe. O dira tshwetso jang?



A re simolole

A e paterone?

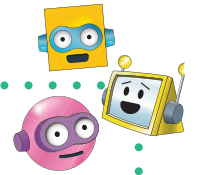
Jaanong, tatelano ke eng?



Ee, lebelelang malomo a a ipoeletsang. Paterone ke tatelano ya dilo tse ipoeletsang.

Tatelano ke sethlopha sa dilo. Fa di ipoeletsa, di tlhama paterone.

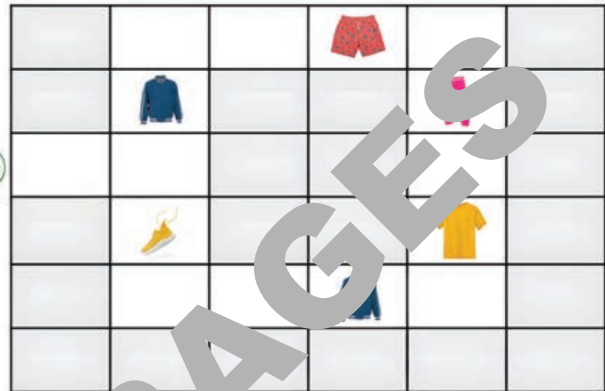
Tiro 1



1. Thusa go fitlhela diaparo tsa Aamina. Leba kiriti.

a. Fitlhelela diaparo tsa metshameko.

b. Fitlhelela diaparo tsa boikhutso.



2. Dira khoutu ya go tala go borokgwana jo bohibidu.

- Khoutu e tshwanelse go simolola kwa motsele ya ntlha.
- Fapanele dilo tse di ka go kganelang mo tseleng ka go tlola kwa godimo ga tsona.

Fele			
Retologela mo molemeng		Retologela mo mojeng	
Tlola kwa godimo		Boeletsa	(2) (3) (4) (5)

3. Kwala khoutu mme o e leke.

4. Kopa mongwe wa sethlopha go e sekaseka.



Tiro 2

Khoutu 2

1. Leba kiriti.



a. Fitlhelela diaparo tsa metshameko.

b. Fitlhelela diaparo tsa boikhutso.

2. Dira khoutu ya go kgobokanya diaparo tsa metshameko nime o emise kwa lefelong la go emisa.

- Khoutu e tshwanetse go simolola kwa ntlheng wa ntlha.

Kgobokanya sengwe se le se tharo kgotsa go feta.

Pele			
Retologela mo molemeng		Retologela mo mojeng	
Tlola kwa godimo		Boeletsa	(2) (3) (4) (5)

Tiro 2

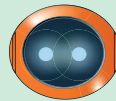
3. Kwala khoutu mme o e leke. Tlhopha letshwao le le maleba go araba potso



A khoutu e na le diphoso?



Ee, diphoso
tse dintsi



Ke phoso e le nnye
kgotsa tse e



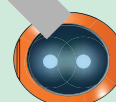
Nnyaa, ga
go diphoso!

4. Kopa leloko la sethopho go e sekaseka.

A khoutu e rarabola ka bothata?



E ka
tokafalile




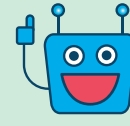


Sentle



Sentle thata

O ikutlwa jang ka tiro e o e dirileng?

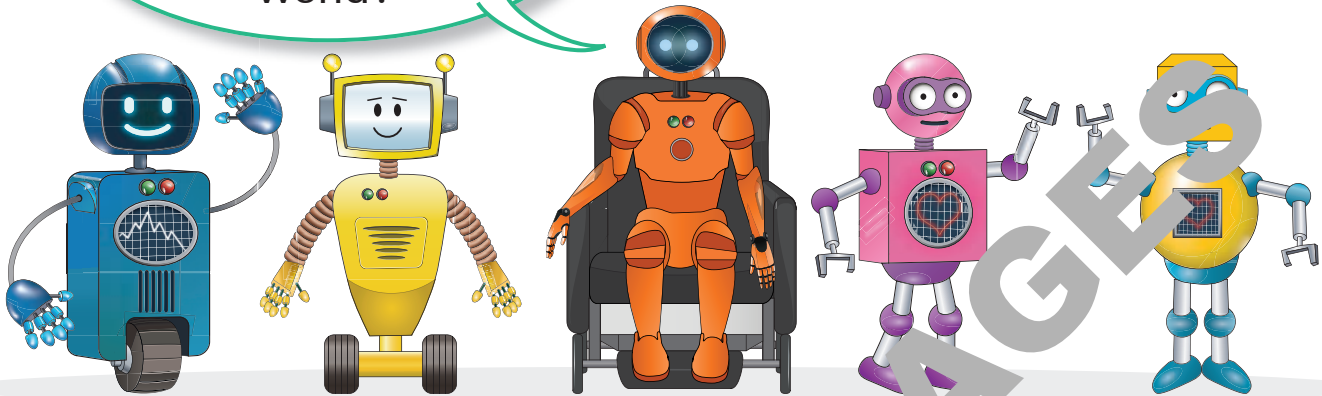
1 	2 	3 	4 
Ke a leka.	Itumetse!	Motlotlo!	Ee!

lefoko le
le ntšhwa

Lenaneo – tatelano ya ditaelo tse di bolelelang khompiuta kgotsa roboto gore e dire eng.

Khompitara – sedirisiwa se se thusang go dira dilo tse dintsi, jaaka go bua le ba bangwe, go tshameka le go batla tshedimosetso.

Ke batla go
itse go le gontsi ka
wena. Mpoletlele ka
wena?



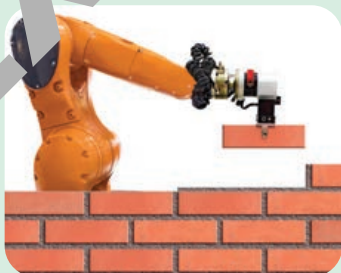
A o itse gore ke tshedimosetso efe e bolokesehileng go
buisiwa ka yona le e e seng yone?

A re si tsele

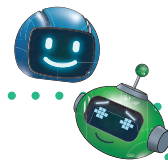


Roboto ke tshedimosetso. E **laelwa** ke motho
a di sekele **khompiutara**.

Roboto e latela ditaelo. E thusa batho go
dira ditiro.



Tiro 1



Bua ka tiro e diroboto tse di e dirang.



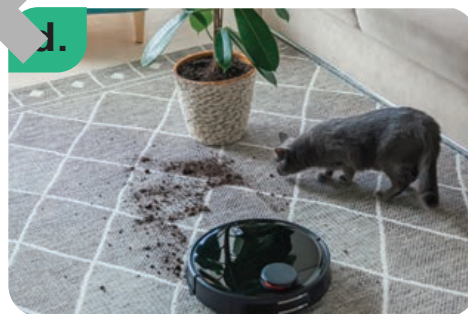
Seatla sa motšhini



Roboto ya bodirelo



Roboto ya go sega
tshaga



Roboto ya go
phepafatsa

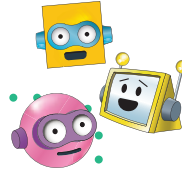


Sefofane sa roboto



Go ithuta ka AI

Tiro 2



Kody o batla go itse go le gontsi ka wena. O tshwanetse go nna bothale. Fa potso e le ya sephiri, o tshwanetse go re, “Nnyaa, moaga go bolelele seo, ke tshedimosetso ya sephiri.”

Ke tiro efe ya kwa ntle e o e ratang?

Leina la gago ke mang?

A o rata go bina?

Nomoro ya gago ya mogala ke eng?

Ke dijo dife tse o di ratang thata?

Mmala o o ratang thata ke ofe?

Atereso ya gago ke efe?

A o na le bebetsididi kgotsa senotsididi?

O na go dira eng morago ga sekolo?



O na le mesifa e 13:

- ditaelo di le pedi tsa 'go retologela ka fa mojeng'
- ditaelo tse robong tsa 'go ya pele'
- ditaelo tse pedi tsa 'go retologela ka fa molemeng'





O na le taelo e le nngwe ya 'tsamaya o kgobokanye tsothe' le ditshupetso tse pedi tsa 'go boelets'a'.



Tiro 2

1. Kwala khoutu. Dirisa dikarata tsa khoutu.
2. Khoutu e tshwanetse go go isa go dikarata tse pedi tse di serolwana le karata e le nngwe e khibidu.
3. Lekola khoutu ya gago.
4. Fetola khoutu ya gago le tsotha.
5. Latela khoutu ya mabotho. Bala potso eo o welang mo go yona mme o arabe.
6. Tswelela fa seitho eha gantsi se reeditse dipotso le o karabo. E re le bone ba leke khoutu.
7. Setlhopa sotlhe se a fetofetoga go fitlha dikarata tsoithe di sekasekwa le go tshwara.

O ikutlweng jaang ka tiro e o e dirileng?

1		2		3		4	
Ke a leka!		Itumetse!		Motlotlo!		Ee!	



Aowa!
A re di thale
gape?

O rata go thala eng?

A re simolole



Thekenoloji e direkwe go thusa batho le go tokafatsa mabotho a bone. Re fithela thekenoloji mo mafelong a mantsi.



Mo matlong a rona



Mo dipolaseng



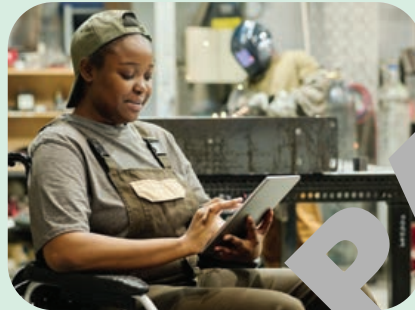
Fa re tsamaya

A re simolole

Sedirisiwa sa khomputara se dirisana le tshedimosetso ya dijitale e e re thusang go di ditiro tsa rona.



Ka puisano ya dijitale



Tiro e

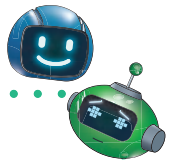


Go kgokaganya batho mo lefatsheng ka bophara

Tshedimosetso ya dijitale – Dikhoutu tse di fitlhweng tse di dirilwang ka nomoro tse di dirisiwang ke khomputara go bo tshwantsho, mafoko le di-bidio.

Mokotswa khoutu – motho yo o bolelang khomputara gore e dire eng.

lefoko le le ntšhwa



Tiro 1

Tlhopha gore ke mang mokgotsi wa khoutu mme ke mang roboto.

Mokgotsi wa khoutu o bala khoutu. Roboto e rentša e bo e thala mo kiriting e e se nang sepe. 'Pen down' e kaya go kgaotsa go thala.

'Pen down' e kaya go simolola go thala. Latela ditaelo.

▶								
▶			■		■			
▶				■				
▶		■			■			
▶			■	■	■			
▶								

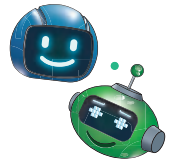
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Fetola g ditiro le tsala ya gago mme lo dire tiro gape.

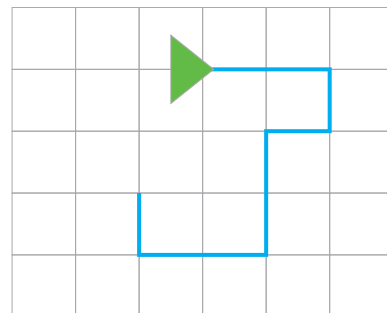
Tiro 2



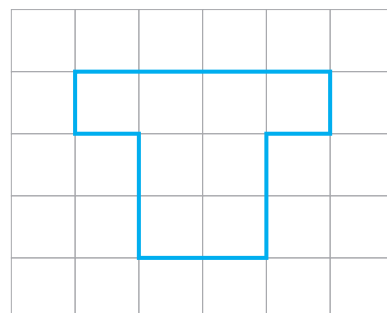
- I. Thala setshwantsho sa gago mo meleng ya kiriti.
 - Nna morago le morago mme o thale o sa lebelele.
 - Tlhopha gore ke mang mokgotsi wa khoutu mme ke mang roboto.
 - Mokgotsi wa khoutu o fa di tse di tlhamaletseng ka go dirisa mofoko a jaaka pele, kwa tlase, phimola mo ya letsogong la molema, go ya letsogong le legolo, pen up le pen down.
 - Roboto e reetse mme e thala khoutu mo kiriti e se neng sepe ka pene ya mmala kgotsa phelepele.
 - Fetolanng tiro mme lo sekaseke tse dingwe.



Simolola fano. Bua ka sebopego sa go thala.

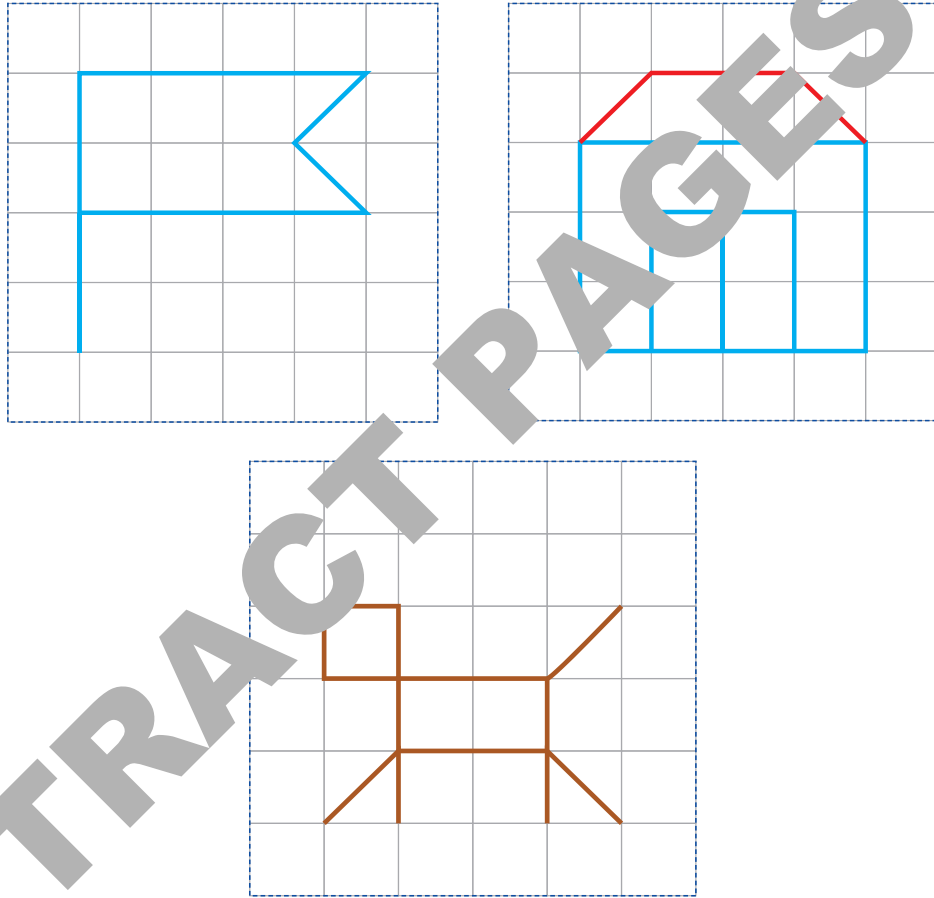


Seno ke sebopego se o tshwanetseng go leka go se thala.

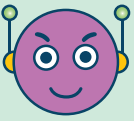





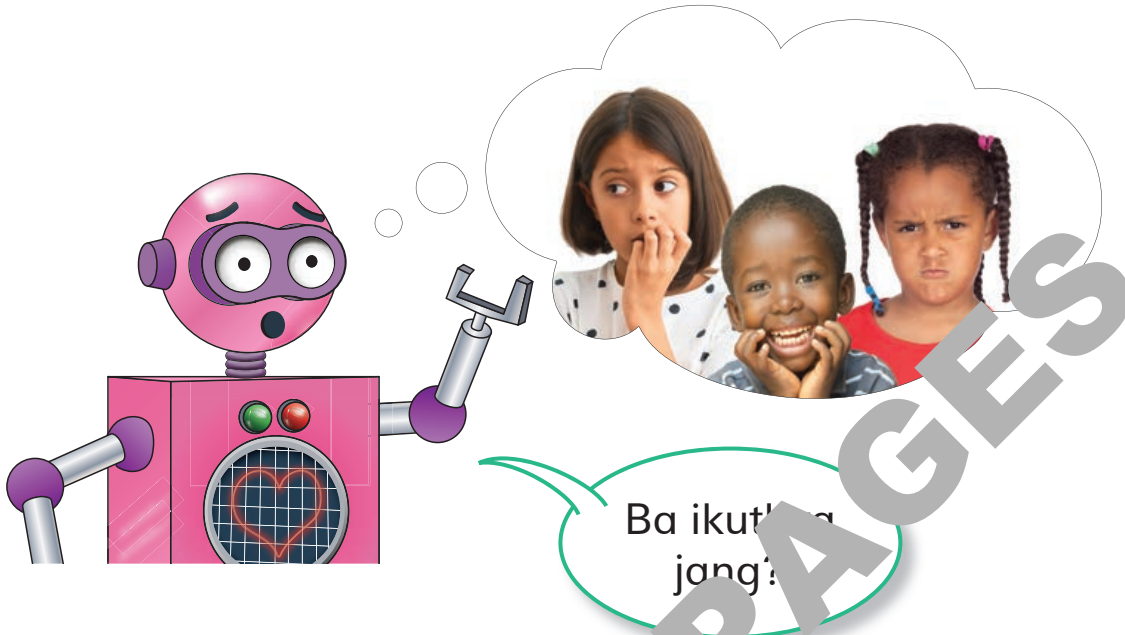
Tiro 2

2. Kopololela ditshwantsho tse mo kiriting.



O ikutiwa jang ka tiro e o e dirileng?

1 	2 	3 	4 
Ke a leka!	Itumetse!	Motlotlo!	Ee!



O ka itse jang gore motho o ikutlwa jang?

A re simolole

Thekenoloji ya **Tshehimosetso (IT)** e mabapi le didiriswa tse di nswang go bereka ka tshedimosetso ya mafaiko, dinomoro, ditshwantsho le modumo.



Dinomoro



Ditshwantsho



Modumo

Khomputara e gakologelwa tshedimosetso ka gonne e na le **memori**.



E boloka mefuta yotlhe ya tshedimosetso gore e e dirise moragonyana.



Dithoko tsa
dikgano



Tiro ya sekolo



Dibidio tsa mo
inthaneteng

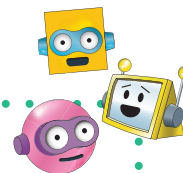
Khomputara e **dirisa** tshedimosetso mme e ka abalola mathata a dinomoro.

Memori – ke lefelo le le tshwereng tshedimosetso ya botlhokwa gore khomputara e e fitlhele gape.

Tshedimosetso – Tshedimosetso e tshwana le foromo e e go bontshang tsela ya go dira sengwe.



Tiro 1



Leba setshwantsho mme o tihophe sesupo se se tshwanang le sona.

a.



1.



2.



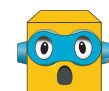
3.



4.



5.



6.

b.



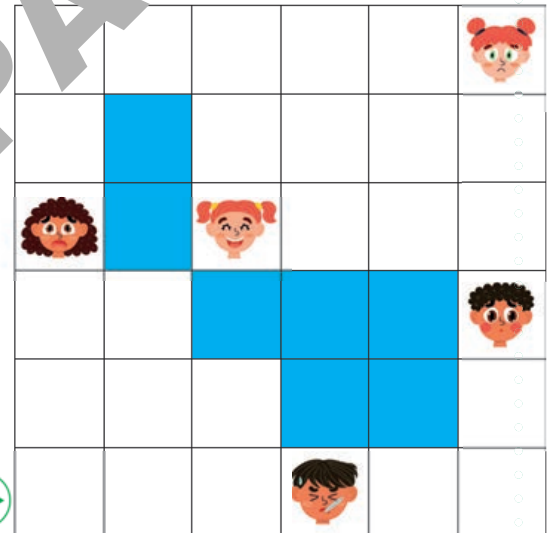
Tiro 2

Re itemogela maikutlo a a farologaneng letsatsi le letsatsi.



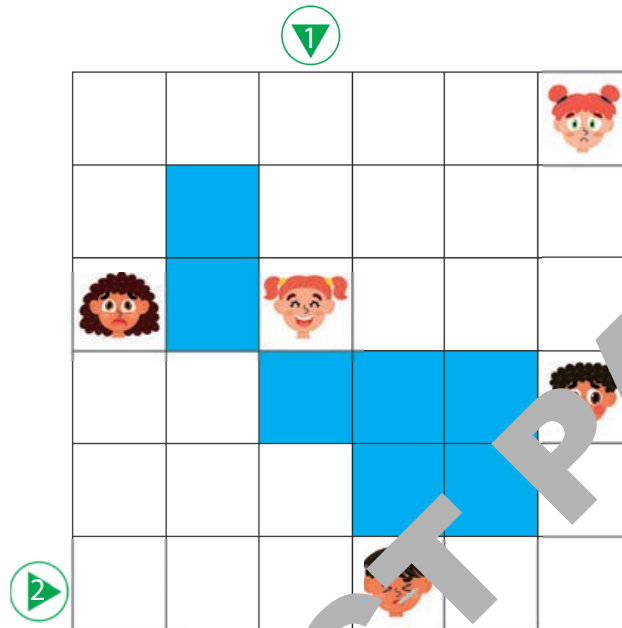
I. Simolola ka motsu wa go simolola wa ntlha 1.

- a. Kwala khoutu y e kgobokanua maikutlo tthe a le ntlhano a le tlhakore.
- b. Sekola khoutu.
- c. Sekaseka, fa go tlhokega.



Tiro 2





2. Simolola ka motsu wa go simolola wa bobedi. ▶



- Kwala khoutu ya go kgobokanya maikutlo otlhe a mathano ka lethakore.
 - Le maikutlo.
 - Ekaseka, fa go tlokega.
- Thopha tsela ya gago e o e ratang.
 - Netefatsa khoutu eo.



O ikutlwa jang ka tiro e o e dirileng?

1 	2 	3 	4 
Ke a leka!	Itumetse!	Motlotlo!	Ee!



Ka dinako dingwe re welwa ke koo mme re tlhoka sedirisiwa sa thuso ya ntlha.

A re sireletse

Dikotšwa li direga. O tshwanetse go nna kebotšha ko le go bolokega mo lefatsheng la mmotota le kwa inthaneteng.

1. Bua ka boitshwaro jo bo sireletsegileng le jo bo sa sireletsegang mo ditshwantshong.
2. Boitshwaro bo ka ama jang botsogo le polokego ya rona?
3. Bapisa boitshwaro jo bo sa sireletsegang le jo bo sireletsegileng. Kwala nomoro fela le tlhaka.



Boitshwaro jo bo sa sireletsegang



Ke palama sethuthuthu ke bua ka mogala.

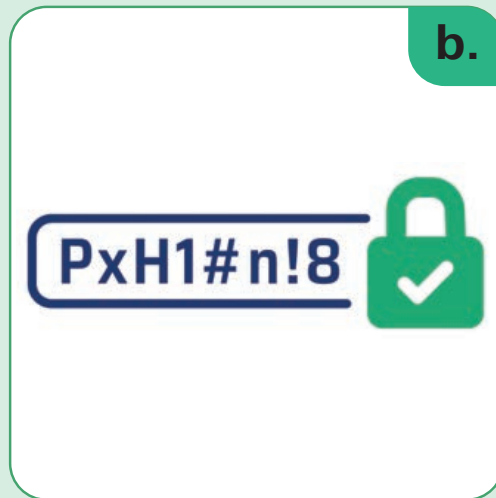


Ke tshela tsela ke kwala melaetsa mo mogaleng.

Boitshwaro jo bo sireletsegileng



Ke emela koloi go retologa pele ke tsaya bolo.



Ke dirisa sephiri se se tiileng ka motswako wa ditlhaka, dinomoro le matshwao.

Boitshwaro jo bo sa sireletsegang

3.



Ke dirisa sephiri se se nang le dinomoro fela kgotsa ditlhaka.

Boitshwaro jo bo sireletsegileng

c.



Ke palama sethuthuthu mme ke lebelela tsela. Mogala o wa tshoganyetso.

4.



Ke taboga mo morago ga kolo e e retologang go tsaya bolo.

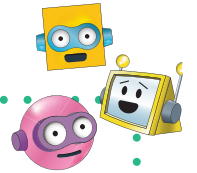
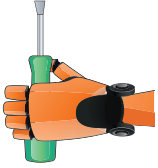
d.



Ke ema mme ke lebelela tsela pele ke tshela tsela. Mogala wa tshoganyetso.

Tiro 1

Dira sete ya thuso ya ntlha



1. Leba ditshwantlano. Bua ka dilo tse di tshwanetseng go sena mo kgetsaneng ya thuso ya ntlha.

O tla tlhoka:

- lenetshwano la khatepote la A4 le lehibidu
- khate ya A4 ya go taka dilo tse di tshwanetseng mo kgetsaneng: bobowa, metsela, setlolo, ditsebe, diatlana, jj.
- Sete ya sekere
- Rula ya 30 cm
- Pene le dikherayone
- Dipene tsa Koki
- Sekgomaretsi

Tiro 1

Dintlha tsa thulaganyo

1. Sete ya thuso ya ntlha ya pampiri e tshwara le kana le pampiri ya A4 mme e na le dilo tse tlhano tsa thuso ya ntlha.

Ditaelo



- Me o pampiri ya A4 ka bogare. Kgaola ditshwaro tsa mabogo ka bobedi mme o di kgomaretse kwa godimo ga lekwalo.

Kgaole sefapaano go tswa mo pampiring e tshwara mme o se kgomaretse kwa pele le kwa morago ga tsebe.



- Dira motlhala, khalara mme o kgaole dilo tse di tla tsenang mo kgetsaneng.
- Kgomaretsa dilo ka fa gare ga lekwalo le le menwang.

Tiro 1

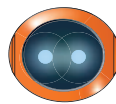
Fano ke sešupo se se feditsweng.



Tihola sete ya gago ya thuso ya ntlha.
Dira setshwano sho sa sefatlhego se se
tshwanetse ka le karabo ya gago.



Sentle thata



Sentle



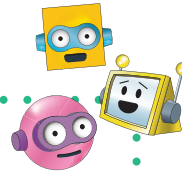
E ka tokafadiwa

Sete ya me ya thuso ya ntlha e bulegile le go tswala
jang sentle?

Sete ya me ya thuso ya ntlha e dirilwe jang ka
botswerere?

Ke kgabisitse le go wetsa sete ya me ya thuso ya
ntlha jang sentle?

Tiro 2



Mo khoutung e, o tla sela le go tlola dilo.
Dithibelo o tshwanetse go di tlola ke a tshense





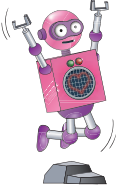


le teraka ya molelo.



Dirisa dikarata tsa khoutu tse

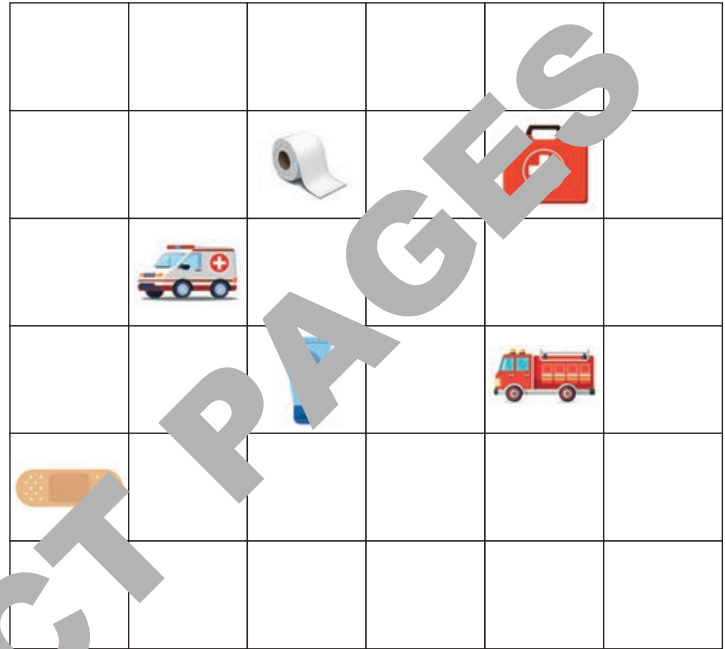


				
Pele	Tlola go le letsamea alema	Tlola go le letona	Sela (goga)	Tlola godimo

Tiro 2

Khoutu I

- I. Lebelela kiriti. Latela khoutu. Simolola ka tshimologo.



[Pele, tloa go le letona], pele, [pele, tloa go le le nnye, pele, pele, sela]

[pele, tloa go le letona], tloa godimo, pele [pele, sela] , [pele, tloa go le le nnye], pele, pele, pele, [pele, tloa go le letona], pele, tloa godimo , pele, [pele, sela] , [pele, tloa go le le nnye], pele]

Tiro 2

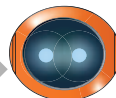


2. Bua le tsala ya gago ka tse di latelang.
 - a. A khoutu e siame?
 - b. O tlola eng godimo?
 - c. O ema kae?
3. Kwala khoutu.
4. Khutshwafatsa khoutu.

A khoutu e na le diphoso?



Nnyaa, ga g
diphoso



Ke phoso e le
nngwe kgotsa
tse pedi

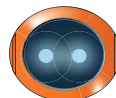


Ee, diphoso tse
dintsi

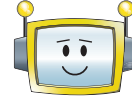
A khoutu e rarabolotse bothata?



Sentle thata



Sentle









E ka tokafadiwa








Tiro 2

Khoutu 2

1. Bala o latele khoutu. Simolola ka tshimologo.



Pele, [pele, sela] , pele, [pele, tlola go
 le letona], tlola godimo , [pele, tlola
 go le letona], [pele, tlola godimo], 
 [tlola go le letona, pele, sela] , [pele, tlola
 go le letona], pele, [pele, sela] , [tlola
 go le letona, pele], pele, sela, ,  .

Tiro 2



2. Bua le tsala ya gago ka tse di latelang.
 - a. O tloa eng godimo?
 - b. O ema kae?
3. Kwala khoutu.

Morago ga go fetola khoutu, o tloka kae?



Ee, re dirile jalo!







Re tlhokile thuso
manye fela.



Re tlhokile thuso
go re bontsha pele.

O ikutlwa jang ka tiriso e o dirileng?

1 		3 	4 
Ke a leka!	Itumetse!	Motlotlo!	Ee!

Ke itse jang gore dijo di itekanetse kgotsa ga di a itekanela?



O ka thusa Amina go dira ditlhopho tse di itekanetseng tse di itekanelang?

A re simolole

Go na le dijo tse di itekanetseng le tse di itekanelang.

Leba ditshwantso tse di tlophile sejana sa dijo tse di itekanetseng.

Arola sejana sa dijo tse di farologaneng tse di tlophileng dijo.

Kwala sejana sa dijo tse di farologaneng tse di tlophileng dijo tse o di tlophileng.



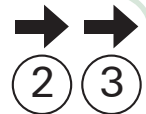
Tiro 1

1. Leba kiriti mme o dire khoutu e yang mo dijong tsothle tse di itekanetseng.
2. Fetola khoutu ya gago le sethlopha se sengwe. Thatlhoba mme o sale morago khoutu ya bone.
3. Kopanya khoutu ya gago o dirisa dikarata tsa go boikgetsa.
4. Thatlhoba leke khoutu.



Kakanyo:

Boeletsa
matshwao



A khoutu e ya le diphoso??



Nonyaa, ga go
diphoso!



Ke phoso e le nngwe
kgotsa tse pedi



Ee, diphoso di
dintsi

A khoutu e rarabolotse bothata?



Sentle thata



Sentle



E ka tokafadiwa

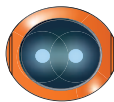
Tiro 1

5. Tlathloba fa go tlokega.

Morago ga go fetola khoutu, a e rarabisa e bothata?



Ee, re dirile jalo!



Re tlhokile thuso e nnye re a.



Re tlhokile thuso go re bontsha pele.

Aroganya – Go kgaoganya litlhopo tse di nnye

Tlathloba diphoso – go bona le go baakanya diphoso



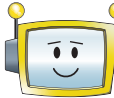



lefoko le
le ntšhwa

Tiro 2

1. Lebelela lekgwafo.
2. Tlhamela khoutu go simolola kwa Tshimologong go ya kwa Bokhutlong. Fa o wela mo sekwereng se se seretse, Ka jalo o tshwanetse go tsaya dijo tse di itekanetseng.



3. Kwala mme o tloka khoutu.

A khoutu e tloka le phoso??		
		
Nna, ga go tloka phoso!	Ke phoso e le nngwe kgotsa tse pedi	Ee, diphoso di dintsi
A khoutu e rarabolotse bothata?		
		
Sentle thata	Sentle	E ka tokafadiwa

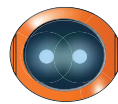
Tiro 2

4. Bolela diphoso fa go tlokega.

Morago ga go fetola khoutu, a e rarabolotse ka tšhomo?



Ee, re e dirile!



Re ne re tlhoka
thuso e potlaka
fela



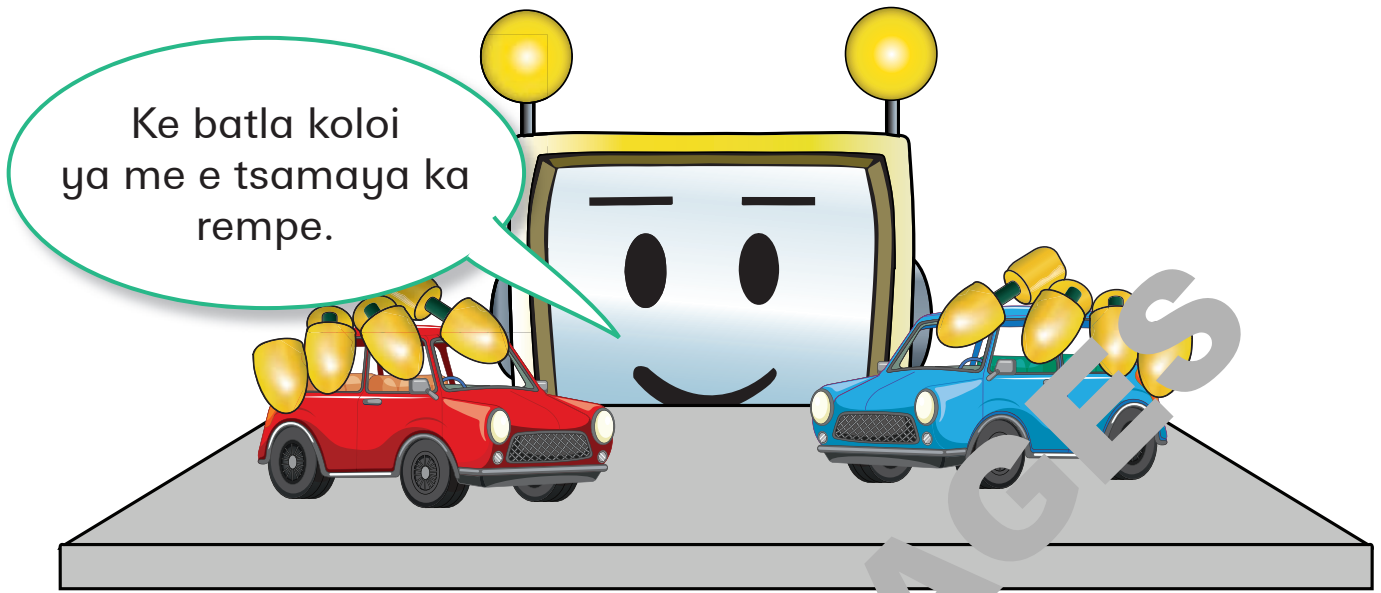
Re re re tlhoka
thuso go re
supa pele.

5. Fokotsa khoutu.

6. Tsereganya le botlhalani ba bangwe
mme o leka e khoutu ya bone.

O ikutlwa jang ka tšhomo e o e dirileng?

1		2		3		4	
Ke a leka!		Itumetse!		Motlotlo!		Ee!	



O itse go aga kolo ka didirisiwa tse di ka diriswang gape?

A re simolotse

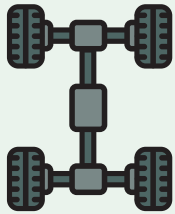
Pele o rulaganya o tshwanetse go baakanya le go bona tse di moso ka selo se o batlang go se aga.

O itse eng ka kolo? Kolo e na le dikarolwana tse di farologaneng.

Pele o rulaganya, o tshwanetse go baakanya le go bona tshedimoso ka selo se o batlang go se aga.

O itse eng ka koloi? Koloi e na le dikarolwana tse di farologaneng.

1.



Motheo o tshegetsa koloi o bo o tshwara maotwana.

2.



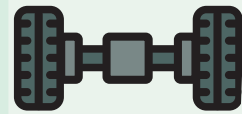
Mmele wa koloi o rula a moka meetsi le bapalami o ka boloka ba ba balesegile.

3.



Maotwana a dira gore koloi e tsamaye.

4.



Aksel e tshwara maotwana.

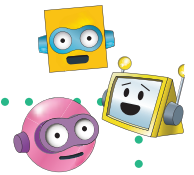
Go aga koloi o tlhoka didirisiwa.

- O ka dirisa eng go aga mmele?
- O ka dirisa eng go dira maotwana?
- A maotwana a pele le a morago a tla tshwana?
- O ka dirisa eng go dira aksel?

Ke dife tsa didirisiwa tse o ka di dirisang?

Botlolo ya polasetiki	Mekwatla e farologaneng ya polasetiki
Lebokoso la mokgwaro	Thupa e bosesane
Terei ya polisterine	Lebokoso la sesepa
Lebokoso la motswako wa meno	Mapotse ya meno
Sekhurumelo se segolo sa polasetiki	Leokara ya dikgomo
Dikgoro tse di sephaphathi tsa polasetiki	Dithupa tsa polasetiki go tshwara aksel
Mekwatla ya botlolo ya polasetiki	

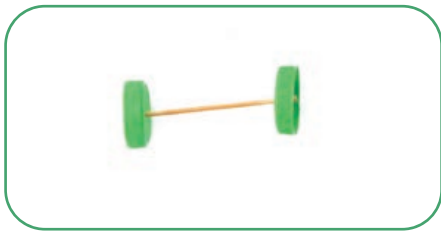




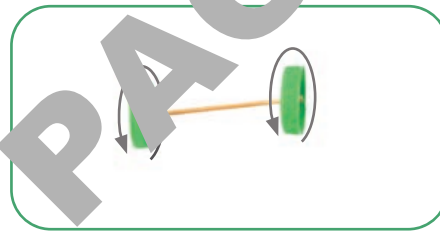
Tiro 1

1. O tla dirisa eng go dikarolwana tse di farologaneng tsa mmele?

Se go dirisiwa jaaka phala ya polasetiki, Letlhi, sekhurumelo sa polasetiki



Dikarolo tse di tsamayang ka sekwere tso kgokotswe mo kgaleng. Tsa botlolo. Maotwana ka bo seding tsa naya ka bonolo. A tshwaganwe ka aksel.

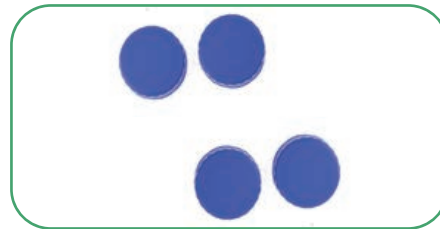


O ka nna wa dirisa aksel e e tsamayang.

Le tsa teko ya leotwana le le kgaogang.



Tlhophisa mmele.



Koloi e tla nna le maotwana a le kae?

Tiro 1

Mmele wa kolo
Tshwara sekhurumelo gaufi le mmele. Gare ga leotwana le tshwanetse go nna gaufi le kwa tlase, e seng ka botlalo mo tlase, gore aksel e tsene sentle.



Netefatsa gore maotwana a tla lekana mmele.

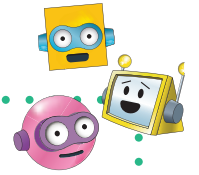
Dira diphatlha tsa aksel mo mmeleng.

2. O tla dira ang diphatlha mo maotwaneng?






3. Ke mang yo o tla aga ditlhophiso tse di farologaneng?
4. Setlhophha se tla kopanya kolo jang?
5. Kwala dikgato tsotlhe (algoritimi) tsa go aga kolo ya gago.
6. Bala dikgato go setlhophha se sengwe. A thulaganyo ya ditaelo e siame?








Tiro 1

7. Aga koloï.




 Ka dinako tsothe	 Bontsi jwa nako	 E ka tokafadiwa
A setlhopha se latela leano la gago a koloï?		
A lo buisana ka diphetogo tse di tshohegang mme lo dira tshwetso jaaka setlhopha?		
A setlhopha se dira ka polokego ka didirisiwa?		
A o tlhokomela gore leano la gago la tiro le phepa?		
A setlhopha se tshelana ka didirisiwa le dilo tse di tshohegang ka botlalo?		
A setlhopha se tshelana dilo ka botlhale ntle le go senya?		

8. Tshatshaba koloï.





 Sentle thata	 Sentle	 E ka tokafadiwa
A maotwana a dikologa sentle?		
A koloï e weditse sentle?		
A koloï e tsamaya ka tsela e nepagetseng fa e ntse e fologela?		

Tiro I

9. Sethopha sa lona se ne se dirisana jang jaaka sethopha?

		
Ka dinako tsothe	Bontsi jwa nako	Ea tokafadiwa
A ke dirile seabe sa me mofiri jeno?		
A ke ne ka reetsa ba bangwe?		
A ba bangwe ba ne ba ntheetsa?		
A ke dirile ditiro tsohle tse ke neng ke tshwanetse go di dira?		

O ikutlwa jang ka mme o e dirileng?

1 	2 	3 	4 
Ke a lefu!	Itumetse!	Motlotlo!	Ee!