Question A: **Welcome to Kannada**   Michael Salter

Kannada is a Dravidian language spoken predominantly by the people of Karnataka in southwestern India. It has around 44 million native speakers.

Below are the names of twelve towns in Karnataka province. On the right are the names of these towns in the Kannada script, given in random order. In a small number of cases, the Kannada name is very similar but not identical to the English equivalent.

1.	Bangalore	A.	ಮಡಿಕೇರಿ
2.	Bannur	B.	ಪುತ್ತೂರು
3.	Basāpur	C.	ಸಥನುರ್
4.	Lakkundi	D.	ತುರುವೇಕೆರೆ
5.	Madikēri	E.	ಶ್ರೀಮಂಗಳ
6.	Malavalli	F.	ಮಂಡ್ಯ
7.	Mandya	G.	ಮಳವಳ್ಳಿ
8.	Mysore	H.	ಸಾಲಿಗ್ರಾಮ
9.	Neshārgi	I.	ರಾಮನಗರ
10.	Puttur	J.	ಬನ್ನೂರ್
11.	Rāmanagara	K.	ಮೈಸೂರು
12.	Sāligrāma	L.	ಬೆಂಗಳೂರು
13.	Sathanur	M.	ಲಕ್ಕುಂಡಿ
14.	Shrīmangala	N.	ಬಸಾಪುರ್
15.	Turuvēkere	O.	ನೆಶಾರಗಿ

A1. Determine the correct correspondences.

A2. The following are the names of four European capital cities in the Kannada script. Give their English versions:

(a) ಪ್ಯಾರಿಸ್   (b) ಲಂಡನ್   (c) ಬುಡಾಪೆಸ್ಟ್   (d) ಪ್ರಾಗ್

A3. How do you think the following place names might be written in the Kannada script?

(a) Canada   (b) Dublin   (c) Liverpool

Picture shows Mysore, location of the 2016 International Linguistics Olympiad. Source: indiamagica.com

Question B: **Maths in Bolivia**   Kazune Sato

Aymara is a language spoken by the Aymara people of the Bolivian Andes. It is one of only a handful of Native American languages with over one million speakers. Along with Spanish and Quechua, it is an official language in Bolivia and Peru.

Given below are some mathematical equalities written out in Aymara. All numbers that appear in each equality are positive integers, and the equalities involve only addition or multiplication.

(a) paqallqu kuti paqallquxa pusi tunk llätunkani kikipa
(b) maya kuti suxtaxa suxta kikipa
(c) tunka pusinixa suxtampi kimsaqallqumpi kikipa
(d) kimsa kuti paqallquxa pä tunk mayani kikipa
(e) tunka paqallqunimpi pusi tunk payanimpixa phisqa tunk llätunkani kikipa
(f) phisqa kuti kimsaqallquxa pusi tunka kikipa
(g) kimsa tunk kimsaqallquxa pä tunk suxtanimpi tunka payanimpi kikipa
(h) llätunka kuti llätunkaxa kimsaqallq tunk mayani kikipa
(i) pä tunka kuti pä tunkaxa pusi pataka kikipa
(j) suxta tunk paqallqunimpi pusi tunk payanimpixa pataka llätunkani kikipa
(k) paqakallq tunk mayani kuti payaxa pataka pusi tunk payani kikipa

B1. Write out the equalities in numerals.

B2. Write out the following equalities in Aymara:
(a) 16 x 4 = 64
(b) 87 + 19 = 106
(c) 390 = 195 x 2

Picture source: vistelacalle.com.

Question C: **Maonan-imals**   Daniel Titmas

Maonan is a Kam-Sui language spoken by around 75,000 people in the border area of Guangxi and Guizhou provinces of China. They refer to themselves as $kj\text{ɔ}\eta^5\ na{:}n^6$, '(Mao)nan people'. Maonan is a tone-rich language, with eight distinct tones. A writing system for Maonan was established in 2010 based on the standard Latin alphabet, though with some letters (confusingly) used to indicate tones. Data here are presented instead in phonetic transcription. The numbers [1] to [8] refer to the tones but the exact pronunciation details are not relevant to the solution.

Below are some words and phrases in Maonan and their English translations in a jumbled order.

1	*da:i² na⁴*	A	beast of burden
2	*dat⁸ na⁴*	B	big bull
3	*dat⁸ nam³*	C	big pig
4	*dat⁸ put⁷ nam³*	D	chicken
5	*dɔ² gjuŋ²*	E	cocoon
6	*dɔ² ka:i⁵*	F	delicious
7	*dɔ² vɛ⁴ kɔŋ¹*	G	eat a lot
8	*guŋ⁶ dza:n⁵*	H	food
9	*hi:u³ gwi²*	I	good teeth
10	*kjɔŋ⁵ dza:n⁵*	J	grasshopper
11	*kjɔŋ⁵ hi:u³ da:i²*	K	hens
12	*kjɔŋ⁵ ka:i⁵ ni⁴*	L	mallard
13	*kɔŋ¹ kɔk⁸*	M	molar (tooth)
14	*mu⁵ ni⁴*	N	pheasant
15	*na⁴ nɔk⁸*	O	silkworms
16	*ni⁴ gwi² dak⁸*	P	sow
17	*ni⁴ mu⁵*	Q	water
18	*nɔk⁸ ka:i⁵*	R	water sprayer
19	*nɔk⁸ ʔɛp⁷*	S	work hard

Note: A pheasant is a type of wild bird. Mallards are wild ducks found throughout Eurasia. A sow is a female pig. A beast of burden is a large animal used to carry loads. A cocoon is a structure spun by insects such as silkworms, moths, butterflies, to protect their larvae (young) while they develop. Picture source inf.news
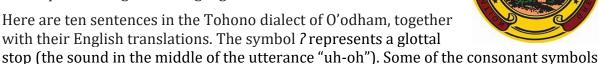
C1. Match the Maonan phrases 1-19 with their corresponding translations A-S.

C2. Translate into English:

(a) *kjɔŋ⁵ dɔ²*   (b) *guŋ⁶ nɔk⁸*   (c) *put⁷ pɔk⁸*   (d) *dɔ² mu⁵ da:i²*

C3. Translate into Maonan:

(a) something good   (b) (farmyard) ducks   (c) rooster/cockerel   (d) pigsty

C4. The Maonan phrase *gjuŋ² na⁴ nam³* means 'rainbow'. What is its literal translation?

Question D: **Look who's talking**   Lori Levin

O'odham, previously known as Papago, is an Uto-Aztecan language of southern Arizona (USA) and northern Sonora (Mexico). In 2000 there were estimated to be approximately 9,750 speakers, although there may be more due to underreporting. It is the 10th most-spoken indigenous language in the United States.

Here are ten sentences in the Tohono dialect of O'odham, together with their English translations. The symbol ʔ represents a glottal stop (the sound in the middle of the utterance "uh-oh"). Some of the consonant symbols are pronounced slightly differently from English, but the details are not relevant.

Ñeok ʔo g ceoj.	The man is speaking.
Pi ʔo ñeok g ʔali.	The child is not speaking.
No pi ñeñok g ʔaʔal.	Aren't the children speaking?
Cikpan ʔo g ʔuwĭ.	The woman is working.
Ñeok ʔañ ʔa:ñi.	I am speaking.
Pi ʔañ him ʔa:ñi.	I am not walking.
Hihim ʔac ʔa:cim.	We are walking.
Cikpan ʔo hegai ceoj.	That man is working.
Cickpan ʔo g cecoj.	The men are working.
Nañ cikpan ʔa:ñi.	Am I working?

D1. Translate the following into O'odham:

    (a)   We are not speaking.

    (b)   Aren't the men working?

    (c)   Are the children walking?

    (d)   We are working.

    (e)   That child is speaking.

D2. Translate the following into English; one of the three examples has a mistake (one word). Indicate the wrong word and its correction.

    (a)   *Cickpan ʔo g ʔaʔal.*

    (b)   *No him g cecoj.*

    (c)   *Pi ʔo ñeok hegai ʔuwĭ.*

Source: Based on data provided by Dr Kenneth Hale.

Question E: **We love isiXhosa**

Babette Newsome

Xhosa, or isiXhosa, is one of the eleven official languages of South Africa, and was the native language of Nelson Mandela, the anti-apartheid activist and the first black president of South Africa between 1994 and 1999.

Xhosa is spoken by approximately 10 million people as their first language, and by 11 million people as an additional language mostly in South Africa, making it the second most widely spoken language in South Africa after Zulu. It famously uses 'click' consonants – for example, the *xh* in the word *isiXhosa* is a click sound, like 'gee up'.

Below are some sentences in Xhosa, along with their English translations.

Ndiyabafundisa.	I teach them.
Ndiyathanda.	I love.
Sithanda isiXhosa.	We love Xhosa.
Bathetha isiRashiya.	They speak Russian.
Uthetha isiNgesi.	You (sg) speak English.
Bayakubona.	They see you (sg).
Nithetha isiNgesi?	Do you (pl) speak English?
Bayafunda?	Do they learn?
Niyasibona.	You (pl) see us.
Singakufundisa?	Can we teach you (sg)?
Sisanifundisa.	We still teach you (pl).
Ndingasifundisa.	I can teach us.
Ndisathetha isiXhosa.	I still speak Xhosa.
Abasafundisi isiZulu.	They still don't teach Zulu.
Asiyabathandi?	Don't we love them?
Andifundi isiXhosa.	I don't learn Xhosa.
Asikathandi abantu.	We don't love the people yet.
Akukandiboni.	You (sg) don't see me yet.
Aniyandiboni?	Don't you (pl) see me?

E1. Translate into English:
   (a) *Bayanithanda?*
   (b) *Ningabafundisa.*
   (c) *Abafundisi isiJamani.*
   (d) *Akusandiboni?*
   (e) *Asikafundi isiFrentshi.*
   (f) *Bangasibonisa.*

E2. Translate into isiXhosa:
- (a)   You (sg.) teach them.
- (b)   You (pl.) speak.
- (c)   Can I see you (pl.)?
- (d)   I still learn.
- (e)   You (sg.) can't see the people.
- (f)   They don't learn English.

E3. Explain the rules of isiXhosa grammar as seen here. (Explain *what* you have discovered, not *how* you went about it!)_

Sources: Kirsch, B. et al. (2004). *Teach Yourself Xhosa*. Teach Yourself Books.
Oosthuysen, J. C. (2016). *The Grammar of isiXhosa*. African Sun Media.
Map: allthingslinguistic.com

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