Appendix B

Sample Items

Questions and Answers for the IKAN Timed Assessment (Form 1)

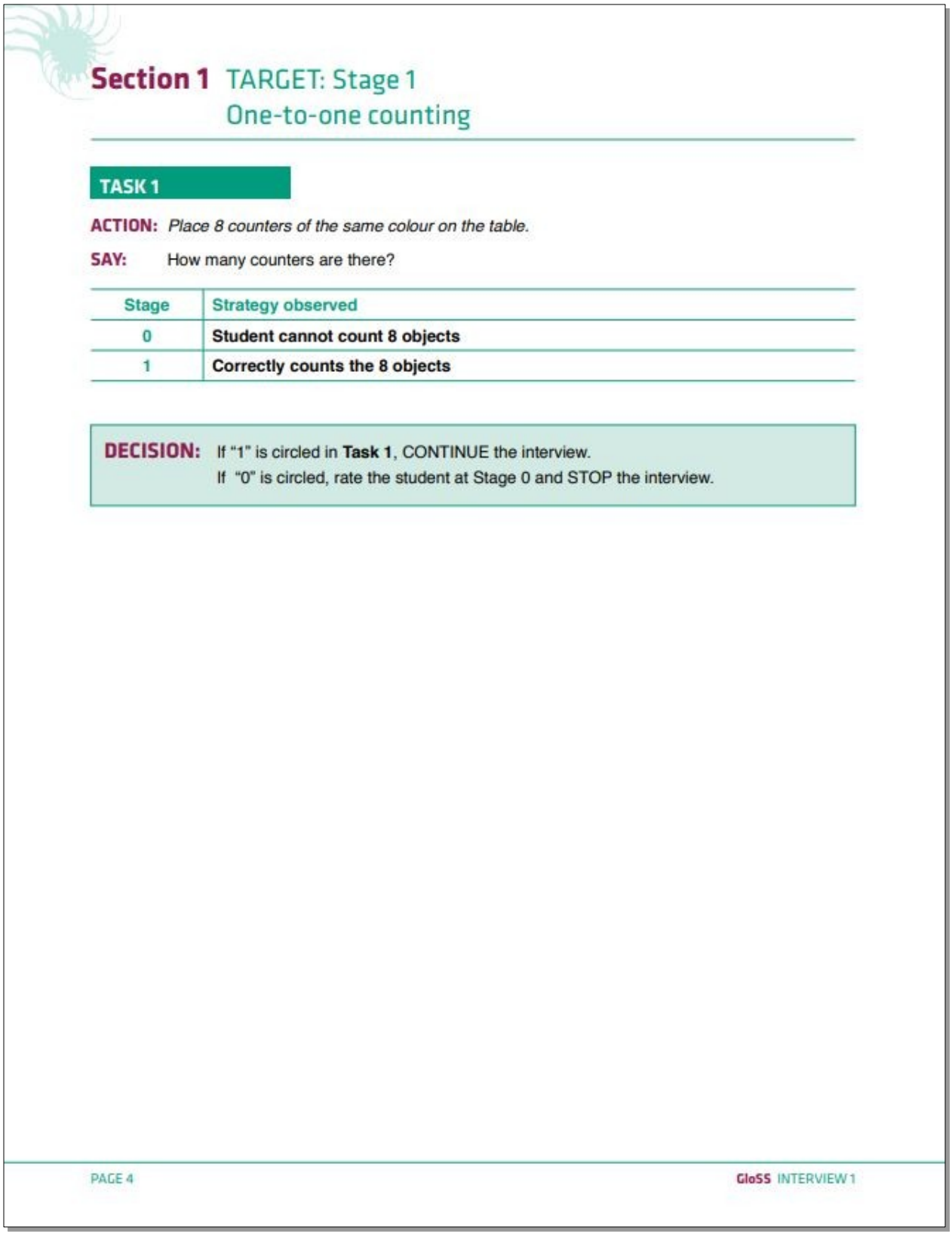
For an example of the video administration of the written assessment, visit: https://nzmaths.co.nz/sites/default/files/Numeracy/IKAN/new/ikan1_audio.mp4.

	Part 1 (Stage 4)	**Part 2 (Stage 5)**	**Part 3 (Stage 6)**	**Part 4 (Stage 7)**	**Part 5 (Stage 8)**
1	What number is one more than 49? **50**	What number is one more than 599? **600**	What number is one more than 439,999? **440,000**	Which decimal is the biggest, 0.639, 0.9, 0.84? **0.9**	Which fraction is the biggest, 3/4, 73/100, 7/10? **3/4**
2	What number is one less than 30? **29**	What number is one less than 1000? **999**	What number is one less than 801,000? **800,999**	Which decimal is the smallest: 2.4, 2.71, 2.084? **2.084**	Which is the smallest? 2/3, 0.6, or 70% **0.6**
3	Write the fraction for one half. **1/2**	Write the fraction for five quarters. **5/4**	Write these fractions in order of size, smallest to biggest: 1/5, 1/7, 1/6 **1/7, 1/6, 1/5**	Which number is the same as 3/5? 5/3, 12/20, 1 2/3, 4/6 **12/20**	How many hundredths are in all of 6.073? **607 or 607.3**
4	Write the fraction for one fifth. **1/5**	Write these fractions in order of size, smallest to biggest: 3/4, 1/4, 2/4 **1/4, 2/4, 3/4**	Write 4 and 1/5 as a fraction. **21/5**	Which fraction is the smallest: 3/8 4/10 1/3? **1/3**	What number is half way between 4.8 and 4.7? **4.75**
5	How many tens are in 80? **8**	How many tens are in all of the number 832? **83 or 83.2**	How many hundreds are in all of this number, 53,605? **536 or 536.05**	Round the following decimal to the nearest tenth: 6.49 **6.5**	What is the simplest fraction for 80%? **4/5**
6	What is the number for nine groups of ten? **90**	What is the number for 49 groups of ten? **490**	How many tenths are in all of the number, 5.8? **58**	How many thousands are in all of 6 457 894? **6457 or 6457.894**	What is 1.3 written as a percentage? **130%**
7	7 + 7 =? **14**	7 + 9 =? **16**	15 – 8 = ? **7**	63 ÷ 9 = ? **7**	What is the least common

	Part 1 (Stage 4)	Part 2 (Stage 5)	Part 3 (Stage 6)	Part 4 (Stage 7)	Part 5 (Stage 8)
					multiple of 6 and 9? **18**
8	Half of 18 is ? **9**	5 x 7 = ? **35**	6 x 7 = ? **42**	What number divided by 7 gives 6? **42**	What is the highest common factor of 36 and 48? **12**

Sample Items from GloSS

For additional sample items, visit https://nzmaths.co.nz/gloss-forms.



Section 1 TARGET: Stage 1
One-to-one counting

TASK 1

ACTION: *Place 8 counters of the same colour on the table.*

SAY: How many counters are there?

Stage	Strategy observed
0	**Student cannot count 8 objects**
1	**Correctly counts the 8 objects**

DECISION: If "1" is circled in **Task 1**, CONTINUE the interview.
If "0" is circled, rate the student at Stage 0 and STOP the interview.

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GloSS INTERVIEW 1

Section 2 TARGET: Stages 2–3 or 4
Counting from one or Advanced counting

TASK 2

SAY: Please hold out your hands for me.
ACTION: *Place 3 counters in the student's hand.*

SAY: Here are 3 counters.
ACTION: *Place 6 counters in their other hand.*

SAY: Here are another 6 counters.
ACTION: *Close the student's hands to encourage imaging.*

SAY: How many counters have you got altogether?
ACTION: *Allow the student to open their hands if they find imaging difficult.*

Stage	Strategy observed
1	**Cannot solve the addition problem** (Stage 1)
2–3	**Physically counts all the objects from 1 on materials** (Stage 2) **Correctly counts all the items from 1 by imaging** (Stage 3)
4 or higher	**Counts on** e.g., 4, 5, 6, 7, 8, 9 **or** 7, 8, 9 **Knows** 3 + 6

DECISION: If **either** "2–3" **or** "4" are circled in **Task 2**, CONTINUE the interview.
If "1" is circled, STOP the interview. If in any doubt, CONTINUE the interview.

Section 3 TARGET: Stages 4 or Early 5
Advanced counting or Early additive part-whole

*Do all **three** tasks on these two pages.*

TASK 3

ACTION: *Place 9 counters under a card then place 7 under another card.*

SAY: Here are 9 counters, and here are 7 counters.
How many counters are there altogether?

Stage	Strategy observed
3	**Cannot solve the problem** (After removing the cards–Stage 1) **Counts all objects from 1 on materials** (Stage 2) **e.g.,** 1, 2, 3, …, 16 **Counts all objects from 1 by imaging** (Stage 3) **e.g.,** 1, 2, 3, …, 16
4	**Counts on** (Stage 4) **e.g.,** 10, 11, 12, …, 15, 16 **or** 8, 9, 10, …, 15, 16
Early 5 or higher	**Uses a part-whole strategy e.g.,** - Making to ten e.g., 9 + 1 = 10; 10 + 6 = 16 - Doubling with compensation e.g., 7 + 7 = 14; 14 + 2 = 16 **or** 8 + 8 = 16 **or** 9 + 9 = 18; 18 – 2 = 16 - Addition fact e.g., 9 + 7 = 16

TASK 4

SAY: There are 5 cups in each row.
SAY: There are 6 rows of cups.
SAY: How many cups are there altogether?

ACTION: *Sweep one row with your finger.*
ACTION: *Point to each row one by one.*

Stage	Strategy observed
3	**Cannot solve the problem** **Counts all objects from 1 on materials** (Stage 2) **e.g.,** 1, 2, 3, 4, **5**, 6, …, **30** **Counts all objects from 1 by imaging** (Stage 3) **e.g.,** 1, 2, 3, 4, **5**, 6, …, **30**
4	**Skip counting** (Stage 4) **e.g.,** 5, 10, 15, 20, 25, 30 [**or** 6, 12, 18, 24, 30]
Early 5 or higher	**Uses an additive or multiplicative strategy e.g.,** - Repeat addition e.g., 5 + 5 + 5 + 5 + 5 + 5 = 30 **or** 5 + 5 = 10; 10 + 5 = 15; …; 25 + 5 = 30 - Multiplication strategies e.g., 4 × 5 = 20; 20 + 5 + 5 = 30 - Multiplication fact e.g., 6 × 5 = 30