

EMACC

Form 1

Early AD/MCI Alzheimer's Cognitive Composite

Form 1

Protocol

Site number

Screening number

Randomisation number

Assessment date

Rater

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Build 1

English (AUS) - Version 1.1



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Reitan, R. M. (1958). "Validity of the Trail Making test as an indicator of organic brain damage". Percept. Mot Skills. 8: 271–276

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Delis-Kaplan Executive Function System (D-KEFS)

Verbal Fluency Test

D-KEFS Letter Fluency

Materials

- A stopwatch

Use the following prompts during the Letter Fluency condition:

- If the participant fails to make a response after any 15-second interval, say: **Keep going**. Provide this prompt only once per trial.
- The first time a participant generates three consecutive words that do not start with the designated letter, say: **The letter we are using now is _____**. Provide this prompt only once per trial.



Keep the stopwatch running while providing prompts.

D-KEFS Letter Fluency**Trial 1**

I'm going to say a letter of the alphabet. When I say "begin", I want you to tell me as many words as you can that begin with that letter. You will have 60 seconds before I tell you to stop. None of the words can be names of people or places or numbers. For example, if I gave you the letter *T*, you could say *take*, *toy*, *tooth*, and so forth, but you should not say *Tom* because that is a person's name; you should not say *Texas* because that is the name of a place; and you should not say *twelve* because that is a number. Also, do not give me the same word with different endings. For example, if you say *take*, you should not also say *takes* or *taking*. Do you have any questions?

The first letter is F. Ready? Begin.

[Start timing. On the record pages, write the participant's responses verbatim. Record the responses that the participant generates during the first 15 seconds in the first column (labelled "1–15 seconds"), record the responses given in the second 15 seconds in the second column (labelled "16–30 seconds"), and so forth in the third and fourth column on the following page. After 60 seconds, say:]

Stop.

D-KEFS Letter Fluency**Trial 1****First Interval: 1-15 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses**Second Interval: 16-30 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses

D-KEFS Letter Fluency**Trial 1****Third Interval: 31-45 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses**Fourth Interval: 46-60 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses

D-KEFS Letter Fluency

Trial 2

Introduce the letter by saying:

The next letter is A. Ready? Begin.

[Start timing. Record the participant's responses as described for Trial 1. After 60 seconds, say:]

Stop.

D-KEFS Letter Fluency**Trial 2****First Interval: 1-15 seconds**☐ No responses provided

Correct

Second Interval: 16-30 seconds☐ No responses provided

Correct

1. ☐2. ☐3. ☐4. ☐5. ☐6. ☐7. ☐8. ☐9. ☐10. ☐11. ☐12. ☐13. ☐14. ☐15. ☐1. ☐2. ☐3. ☐4. ☐5. ☐6. ☐7. ☐8. ☐9. ☐10. ☐11. ☐12. ☐13. ☐14. ☐15. ☐☐ No correct responses☐ No correct responses

D-KEFS Letter Fluency**Trial 2****Third Interval: 31-45 seconds**☐ No responses provided

Correct

1. ☐2. ☐3. ☐4. ☐5. ☐6. ☐7. ☐8. ☐9. ☐10. ☐11. ☐12. ☐13. ☐14. ☐15. ☐☐ No correct responses**Fourth Interval: 46-60 seconds**☐ No responses provided

Correct

1. ☐2. ☐3. ☐4. ☐5. ☐6. ☐7. ☐8. ☐9. ☐10. ☐11. ☐12. ☐13. ☐14. ☐15. ☐☐ No correct responses

D-KEFS Letter Fluency

Trial 3

Introduce the letter by saying:

The next letter is S. Ready? Begin.

[Start timing. Record the participant's responses as described for Trial 1. After 60 seconds, say:]

Stop.

D-KEFS Letter Fluency**Trial 3****First Interval: 1-15 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses**Second Interval: 16-30 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses

D-KEFS Letter Fluency**Trial 3****Third Interval: 31-45 seconds**☐ No responses provided

Correct

1. ☐2. ☐3. ☐4. ☐5. ☐6. ☐7. ☐8. ☐9. ☐10. ☐11. ☐12. ☐13. ☐14. ☐15. ☐☐ No correct responses**Fourth Interval: 46-60 seconds**☐ No responses provided

Correct

1. ☐2. ☐3. ☐4. ☐5. ☐6. ☐7. ☐8. ☐9. ☐10. ☐11. ☐12. ☐13. ☐14. ☐15. ☐☐ No correct responses

D-KEFS Category Fluency

Use the following prompts during the Category Fluency condition:

- If the participant fails to make a response after any 15-second interval, say: **Keep going.** Provide this prompt only once per trial.
- The first time a participant generates three consecutive words that do not fit the category, say: **The category we are using now is _____.** Provide this prompt only once per trial.



Keep the stopwatch running while providing prompts.

Trial 1

Now we are going to do something a little different. This time I want you to tell me as many animals as you can. It doesn't matter what letter they start with. You will have 60 seconds before I tell you to stop. Do you have any questions? Ready? Begin.

[Start timing. On the record pages, write the participant's responses verbatim. As before, write the participant's responses in the appropriate 15-second interval columns. At the end of 60 seconds, say:]

Stop.

D-KEFS Category Fluency**Trial 1**

First Interval: 1-15 seconds		Second Interval: 16-30 seconds	
<input type="checkbox"/> No responses provided		<input type="checkbox"/> No responses provided	
	Correct		Correct
1.	<input type="checkbox"/>	1.	<input type="checkbox"/>
2.	<input type="checkbox"/>	2.	<input type="checkbox"/>
3.	<input type="checkbox"/>	3.	<input type="checkbox"/>
4.	<input type="checkbox"/>	4.	<input type="checkbox"/>
5.	<input type="checkbox"/>	5.	<input type="checkbox"/>
6.	<input type="checkbox"/>	6.	<input type="checkbox"/>
7.	<input type="checkbox"/>	7.	<input type="checkbox"/>
8.	<input type="checkbox"/>	8.	<input type="checkbox"/>
9.	<input type="checkbox"/>	9.	<input type="checkbox"/>
10.	<input type="checkbox"/>	10.	<input type="checkbox"/>
11.	<input type="checkbox"/>	11.	<input type="checkbox"/>
12.	<input type="checkbox"/>	12.	<input type="checkbox"/>
13.	<input type="checkbox"/>	13.	<input type="checkbox"/>
14.	<input type="checkbox"/>	14.	<input type="checkbox"/>
15.	<input type="checkbox"/>	15.	<input type="checkbox"/>
<input type="checkbox"/> No correct responses		<input type="checkbox"/> No correct responses	

D-KEFS Category Fluency**Trial 1****Third Interval: 31-45 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses**Fourth Interval: 46-60 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses

D-KEFS Category Fluency

Trial 2

Introduce the category by saying:

Now tell me as many boys' names as you can. You will have 60 seconds before I tell you to stop. Ready? Begin.

[Start timing. Record the participant's responses as described for Trial 1. At the end of 60 seconds, say:]

Stop.

D-KEFS Category Fluency**Trial 2**

First Interval: 1-15 seconds		Second Interval: 16-30 seconds	
<input type="checkbox"/> No responses provided		<input type="checkbox"/> No responses provided	
	Correct		Correct
1.	<input type="checkbox"/>	1.	<input type="checkbox"/>
2.	<input type="checkbox"/>	2.	<input type="checkbox"/>
3.	<input type="checkbox"/>	3.	<input type="checkbox"/>
4.	<input type="checkbox"/>	4.	<input type="checkbox"/>
5.	<input type="checkbox"/>	5.	<input type="checkbox"/>
6.	<input type="checkbox"/>	6.	<input type="checkbox"/>
7.	<input type="checkbox"/>	7.	<input type="checkbox"/>
8.	<input type="checkbox"/>	8.	<input type="checkbox"/>
9.	<input type="checkbox"/>	9.	<input type="checkbox"/>
10.	<input type="checkbox"/>	10.	<input type="checkbox"/>
11.	<input type="checkbox"/>	11.	<input type="checkbox"/>
12.	<input type="checkbox"/>	12.	<input type="checkbox"/>
13.	<input type="checkbox"/>	13.	<input type="checkbox"/>
14.	<input type="checkbox"/>	14.	<input type="checkbox"/>
15.	<input type="checkbox"/>	15.	<input type="checkbox"/>
<input type="checkbox"/> No correct responses		<input type="checkbox"/> No correct responses	

D-KEFS Category Fluency**Trial 2****Third Interval: 31-45 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses**Fourth Interval: 46-60 seconds**☐ No responses provided

Correct

- | | |
|-----|--------------------------|
| 1. | <input type="checkbox"/> |
| 2. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> |
| 4. | <input type="checkbox"/> |
| 5. | <input type="checkbox"/> |
| 6. | <input type="checkbox"/> |
| 7. | <input type="checkbox"/> |
| 8. | <input type="checkbox"/> |
| 9. | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> |
| 11. | <input type="checkbox"/> |
| 12. | <input type="checkbox"/> |
| 13. | <input type="checkbox"/> |
| 14. | <input type="checkbox"/> |
| 15. | <input type="checkbox"/> |

☐ No correct responses

Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV)

Symbol Coding Subtest

Materials

- A stopwatch
- A sharpened pencil
- Coding worksheet

Demonstration items



Do NOT proceed with the test items until the participant understands the task.

Present the Coding worksheet, along with a sharpened pencil, to the participant and say:

Next, I'm going to ask you to copy some symbols.

You MUST demonstrate the **first three** demonstration items for the participant. Point to the key above the test items and point across the numbers from 1 to 9. Say:

Look at these boxes. Each box has a number in the top part and a special mark in the bottom part. Each number has its own mark [point to 1 and its symbol in the key, then 2 and its symbol].

Point to the demonstration items and say:

Down here, the boxes have numbers in the top parts but are empty in the bottom parts. You are to draw the marks that belong in the empty boxes, like this.

[Pause – turn to the next page for remaining instructions]

WAIS-IV Coding**Demonstration items**

Point to the first demonstration item (6) and point to the key to show its corresponding symbol. Say:

Here is a 6. The 6 has this mark, so I draw that mark in the box, like this [write the symbol].

Point to the second demonstration item (8) and point to the key to show its corresponding symbol. Say:

Here is an 8. The 8 has this mark, so I draw that mark in the box, like this [write the symbol].

Point to the third demonstration item (3) and point to the key to show its corresponding symbol. Say:

Here is a 3. The 3 has this mark, so I draw that mark in the box, like this [write the symbol].

WAIS-IV Coding**Sample Items**

Immediately correct any errors made by the participant on a sample item.

Point to the sample items. Say:

Now you do these. Stop when you get to this line [point to the heavy line that separates the sample items from the test items].

Allow the participant to work alone on the remaining six sample items.

If the participant makes a mistake on a sample item, correct the error immediately. Use the item to review the use of the key. Continue to help the participant, if necessary, until the participant correctly completes all six sample items.

If the participant completes the sample items correctly:

Offer praise such as **Yes** or **Right** and, finally, **Now you know how to do them.**

WAIS-IV Coding

Test items



Provide encouragement or reminders as needed, but DO NOT stop timing. Record the participant's performance after **120 seconds**.

When the participant has successfully completed the sample items, say:

When I say go, do these the same way. Start here [point to the first test item], **go in order and do not skip any. Work as fast as you can without making any mistakes until I tell you to stop. Are you ready? Go!** [START TIMING]

Do not discourage a participant from making spontaneous corrections unless they do so repeatedly and it impedes performance.

Do not provide the participant with an eraser. If the participant asks what to do if they make a mistake, say: **That's OK. Just keep working as fast as you can.**

If the examinee omits an item or begins to complete a row in reverse order (from their right to left), say: **Do them in order. Don't skip any.** Point to the first omitted item and say: **Do this one next.**

If necessary, remind the participant to go in order and continue working. Give no further assistance.

[Turn to the next page to record the participant's performance]

WAIS-IV Coding

Scoring



Watch the participant's performance closely. Do NOT allow them to skip around.

Mark the completion point after 120 seconds below and on the Coding worksheet.
If the participant is still working at 120 seconds, stop timing and say: **Stop**.

135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119	118
1	6	2	4	8	5	7	2	3	8	6	3	7	5	9	1	4	6
117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101	100
4	3	2	5	1	7	6	9	2	5	7	4	8	1	9	8	6	3
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82
3	2	7	4	6	5	3	7	8	9	6	2	4	1	5	9	1	8
81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
9	5	6	8	4	3	5	2	9	7	1	8	2	3	1	4	6	7
63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46
4	6	5	8	2	7	8	2	4	1	5	7	9	3	6	9	3	1
45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
3	8	7	1	3	4	6	8	5	9	6	5	2	7	4	2	1	9
27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10
5	6	7	4	1	8	9	2	7	3	4	6	5	2	9	1	3	8
9	8	7	6	5	4	3	2	1									
5	3	9	6	7	2	8	4	1	2	7	1	4	5	9	3	8	6

Demo sample

WAIS-IV Coding

Scoring



Do NOT score until the assessment is complete.

Circle all incorrectly decoded items.

Item # →
Stimulus →
Correct response →

1	2	3	4	5	6	7	8	9
1	4	8	2	7	6	9	3	5
└	—	┐)	(┌	┐	^	

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
8	3	1	9	2	5	6	4	3	7	2	9	8	1	4	7	6	5
┐	^	└	┐)		┌	—	^	()	┐	└	└	—	(┌	
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
9	1	2	4	7	2	5	6	9	5	8	6	4	3	1	7	8	3
┐	└)	—	()		┌	┐		┐	┌	—	^	└	(┐	^
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
1	3	9	6	3	9	7	5	1	4	2	8	7	2	8	5	6	4
└	^	┐	┌	^	┐	(└	—)	┐	()	┐		┌	—
64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
7	6	4	1	3	2	8	1	7	9	2	5	3	4	8	6	5	9
(┌	—	└	^)	┐	└	(┐)		^	—	┐	┌		┐
82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
8	1	9	5	1	4	2	6	9	8	7	3	5	6	4	7	2	3
┐	└	┐		└	—)	┌	┐	┐	(^		┌	—	()	^
100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117
3	6	8	9	1	8	4	7	5	2	9	6	7	1	5	2	3	4
^	┌	┐	┐	└	┐	—	()	┐	┌	(└)	^	—
118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
6	4	1	9	5	7	3	6	8	3	2	7	5	8	4	2	9	1
┌	—	└	┐		(^	┌	┐	^)	(┐	—)	┐	└

Total number of **CORRECTLY** decoded symbols in **120 seconds**

WAIS-IV Coding**Worksheet image capture**

AFTER the assessment is completed,
please capture an image of the participant's Coding worksheet below



Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV)

Digit Span

General directions

Digit Span includes two tasks: Digit Span Forward (Forward) and Digit Span Backward (Backward). Administer both tasks to the participant.

Each test item is composed of two trials. Administer both trials of each item.

Read each trial verbatim at the rate of one digit per second, dropping your voice slightly on the last digit in the sequence. Pause to allow the participant to respond.

If the participant:

- | | |
|--|--|
| <ul style="list-style-type: none"> • begins to respond before you have finished reading the trial | <p>Present the remainder of the trial and allow the participant to respond. Award appropriate credit for the response and then say: Remember to wait until I'm finished before you start.</p> |
| <ul style="list-style-type: none"> • asks you to repeat the trial | <p>Say: I cannot repeat the sequence. Just take your best guess.</p> |
| <ul style="list-style-type: none"> • provides multiple responses to a trial or self-corrects after their initial response | <p>Score only the intended response. If it is not clear which one is the intended response, say: You said [insert participant's response] and you said [insert participant's response]. Which one did you mean?</p> |

Provide assistance on the sample item of Backward. Proceed to Item 1 even if the participant is unable to respond correctly to any trial of the sample items.

WAIS-IV Digit Span**Scoring guidelines**

Record the participant's responses verbatim. Correct responses are listed.

For each trial, score **1** point if the participant gives a correct response.

For each trial, score **0** points if the participant

- gives an incorrect response or
- says that they do not know the answer or
- does not respond within approximately 30 seconds.



Discontinue after scores of 0 on both trials of an item.

WAIS-IV Digit Span**Item administration Forward**

To introduce the task, say: **Now I'm going to say some numbers. Listen carefully; I can only say them one time. When I am through, I want you to say them back to me in the same order. Just say what I say.**


Proceed to Trial 1 of Item 1.



Remember to administer Backward regardless of the participant's performance on Forward.

WAIS-IV Digit Span

Forward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 1


Trial	Response	0	1
9 - 7		<input type="radio"/>	<input type="radio"/>
6 - 3		<input type="radio"/>	<input type="radio"/>

Item 2

Trial	Response	0	1
5 - 8 - 2		<input type="radio"/>	<input type="radio"/>
6 - 9 - 4		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span

Forward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 3


Trial	Response	0	1
7 - 2 - 8 - 6		<input type="radio"/>	<input type="radio"/>
6 - 4 - 3 - 9		<input type="radio"/>	<input type="radio"/>

Item 4

Trial	Response	0	1
4 - 2 - 7 - 3 - 1		<input type="radio"/>	<input type="radio"/>
7 - 5 - 8 - 3 - 6		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span

Forward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 5


Trial	Response	0	1
3 - 9 - 2 - 4 - 8 - 7		<input type="radio"/>	<input type="radio"/>
6 - 1 - 9 - 4 - 7 - 3		<input type="radio"/>	<input type="radio"/>

Item 6

Trial	Response	0	1
4 - 1 - 7 - 9 - 3 - 8 - 6		<input type="radio"/>	<input type="radio"/>
6 - 9 - 1 - 7 - 4 - 2 - 8		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span

Forward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 7

Trial	Response	0	1
3 - 8 - 2 - 9 - 6 - 1 - 7 - 4		<input type="radio"/>	<input type="radio"/>
5 - 8 - 1 - 3 - 2 - 6 - 4 - 7		<input type="radio"/>	<input type="radio"/>

Item 8

Trial	Response	0	1
2 - 7 - 5 - 8 - 6 - 3 - 1 - 9 - 4		<input type="radio"/>	<input type="radio"/>
7 - 1 - 3 - 9 - 4 - 2 - 5 - 6 - 8		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span**Item administration Backward**Sample Item

Trial 1

Say: **Now I am going to say some more numbers, but this time when I stop I want you to say the numbers backward. If I say 7 – 1, what would you say?**

Correct response [1 - 7]:

Say: **That's right.** Proceed to Trial 2.

Incorrect response:

Say: **That's not quite right. I said 7 – 1, so to say them backward you should say 1 – 7.**

Proceed to Trial 2.

Trial 2

Say: **Let's try another one. Remember to say them backwards. 3 - 4.**

Correct response [4 - 3]:


Say: **That's right. Let's try some more.** Proceed to Item 1.

Incorrect response:

Say: **That's not quite right. I said 3 – 4, so to say them backward, you should say 4 – 3. Let's try some more.** Proceed to Item 1.

WAIS-IV Digit Span

Backward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 1


Trial	Correct Response	Response	0	1
3 - 1	1-3		<input type="radio"/>	<input type="radio"/>
2 - 4	4-2		<input type="radio"/>	<input type="radio"/>

Item 2

Trial	Correct Response	Response	0	1
4 - 6	6-4		<input type="radio"/>	<input type="radio"/>
5 - 7	7-5		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span

Backward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 3


Trial	Correct Response	Response	0	1
6 - 2 - 9	9-2-6		<input type="radio"/>	<input type="radio"/>
4 - 7 - 5	5-7-4		<input type="radio"/>	<input type="radio"/>

Item 4

Trial	Correct Response	Response	0	1
8 - 2 - 7 - 9	9-7-2-8		<input type="radio"/>	<input type="radio"/>
4 - 9 - 6 - 8	8-6-9-4		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span

Backward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 5


Trial	Correct Response	Response	0	1
6 - 5 - 8 - 4 - 3	3-4-8-5-6		<input type="radio"/>	<input type="radio"/>
1 - 5 - 4 - 8 - 6	6-8-4-5-1		<input type="radio"/>	<input type="radio"/>

Item 6

Trial	Correct Response	Response	0	1
5 - 3 - 7 - 4 - 1 - 8	8-1-4-7-3-5		<input type="radio"/>	<input type="radio"/>
7 - 2 - 4 - 8 - 5 - 6	6-5-8-4-2-7		<input type="radio"/>	<input type="radio"/>

WAIS-IV Digit Span

Backward



Administer Trial 1 and Trial 2 of each item. Proceed to the next item if the discontinue criterion has not been met.

Record the responses verbatim in the **Response** column. Score **0** or **1** for each trial.

Item 7

Trial	Correct Response	Response	0	1
8 - 1 - 4 - 9 - 3 - 6 - 2	2-6-3-9-4-1-8		<input type="radio"/>	<input type="radio"/>
4 - 7 - 3 - 9 - 6 - 2 - 8	8-2-6-9-3-7-4		<input type="radio"/>	<input type="radio"/>

Item 8

Trial	Correct Response	Response	0	1
9 - 4 - 3 - 7 - 6 - 2 - 1 - 8	8-1-2-6-7-3-4-9		<input type="radio"/>	<input type="radio"/>
7 - 2 - 8 - 1 - 5 - 6 - 4 - 3	3-4-6-5-1-8-2-7		<input type="radio"/>	<input type="radio"/>

Trail Making Test (TMT)

Materials

BEFORE beginning this assessment, please make sure you have the following available:

- A stopwatch
- (4) TMT worksheets:
 - Part A Sample sheet
 - Part A Test sheet
 - Part B Sample sheet
 - Part B Test sheet
- (2) Sharpened pencils

General Instructions

This test has two parts: **Part A** and **Part B**. The score for each part of the test is the total time required for completion **in seconds**.

The key points to administration of this test are ensuring that the participant understands the instructions, and that you immediately point out any errors that are made.

The maximum time allowed for each part is **300 seconds (5 minutes 0 seconds)**.

The participant should understand that when taking this test it is important to work as quickly as possible and try to avoid making mistakes. The most common examiner error in administering this test is not correcting mistakes quickly and efficiently.

Trail Making Test (TMT)

Part A: Sample

Place the **Part A Sample** sheet flat on the table directly in front of the participant.
Give the participant a pencil and say:

On this page are some numbers [point]. **Begin at number 1** [point to 1] **and draw a line from 1 to 2** [point to 2], **2 to 3** [point to 3], **3 to 4** [point to 4], **and so on, in order, until you reach the end** [point to the circle marked 'end']. **Draw the lines as fast as you can. Ready — Begin!**

If the participant completes the sample item correctly in a manner demonstrating that they understand what to do, say:

Good! Let's try the next one. [Mark the checkbox below and proceed directly to the Test trial using the link provided.]



If they can do the task, select the checkbox below and continue.

☐ The participant completed the Part A sample correctly

If the participant makes a mistake on the sample, **immediately** point out the error and explain why it is incorrect.

[Refer to the next page to find examples of possible explanations]

Trail Making Test (TMT)

Part A: Sample

Examples of possible explanations:

1. **You started with the wrong circle. This is where you start** [point to number 1].
2. **You skipped this circle*** [point to the circle the participant omitted]. **You should go from number 1** [point] **to 2** [point], **2 to 3** [point to 3], **and so on, until you reach the circle marked 'end'** [point].

*(If it is clear that the participant intended to touch a circle but missed it, do not count it as an omission. Remind the participant, however, to be sure to touch each of the circles when drawing the connecting lines.)

If the participant cannot complete Sample A, take their hand and guide the pencil, using the eraser end, through the trail. Return the pencil to the participant with the point down and say:

Now you try it. Remember, begin at number 1 [point] **and draw a line from 1 to 2** [point to 2], **2 to 3** [point to 3], **3 to 4** [point to 4], **and so on, in order, until you reach the circle marked 'end'** [point]. **Do not skip around, but go from one number to the next in the proper order. Remember to work as fast as you can. Ready — Begin!**

Repeat this procedure until the participant succeeds [**proceed with the Test trial on the next page**] OR it becomes evident that the participant cannot do the task.



If they cannot do the task, select the checkbox below and discontinue the test.

- ☐ The participant was unable to complete the Part A Sample

Trail Making Test (TMT)

Part A: Test Trail

Place the **Part A Test** sheet flat on the table directly in front of the participant and say:

On this page are more numbers. Do this the same way. Begin at number 1 [point to 1] **and draw a line from 1 to 2** [point to 2], **2 to 3** [point to 3], **3 to 4** [point to 4], **and so on, in order, until you reach the end** [point]. **Remember to work as fast as you can. Ready — Begin!** [Immediately begin timing]



Watch the participant closely in order to catch any errors as soon as they are made.

If the participant makes an error, **immediately** bring it to their attention and return the participant's pencil to the last correct circle, and continue the test from that point and say something like:

No, go back to here [point to the last correct circle] **and try again.**



Do NOT stop timing while correcting the participant's error.

Errors contribute to the evaluation of the performance principally by increasing the total performance time.

After the participant completes Part A, take the test sheet and record the time to complete on the next page.

Trail Making Test (TMT)

Part A: Scoring

Record the time to complete (in minutes and seconds format) below.
The maximum time allowed for this part is **300 seconds (5 minutes 0 seconds)**.

Part A completion time:

Minutes

▼

Seconds

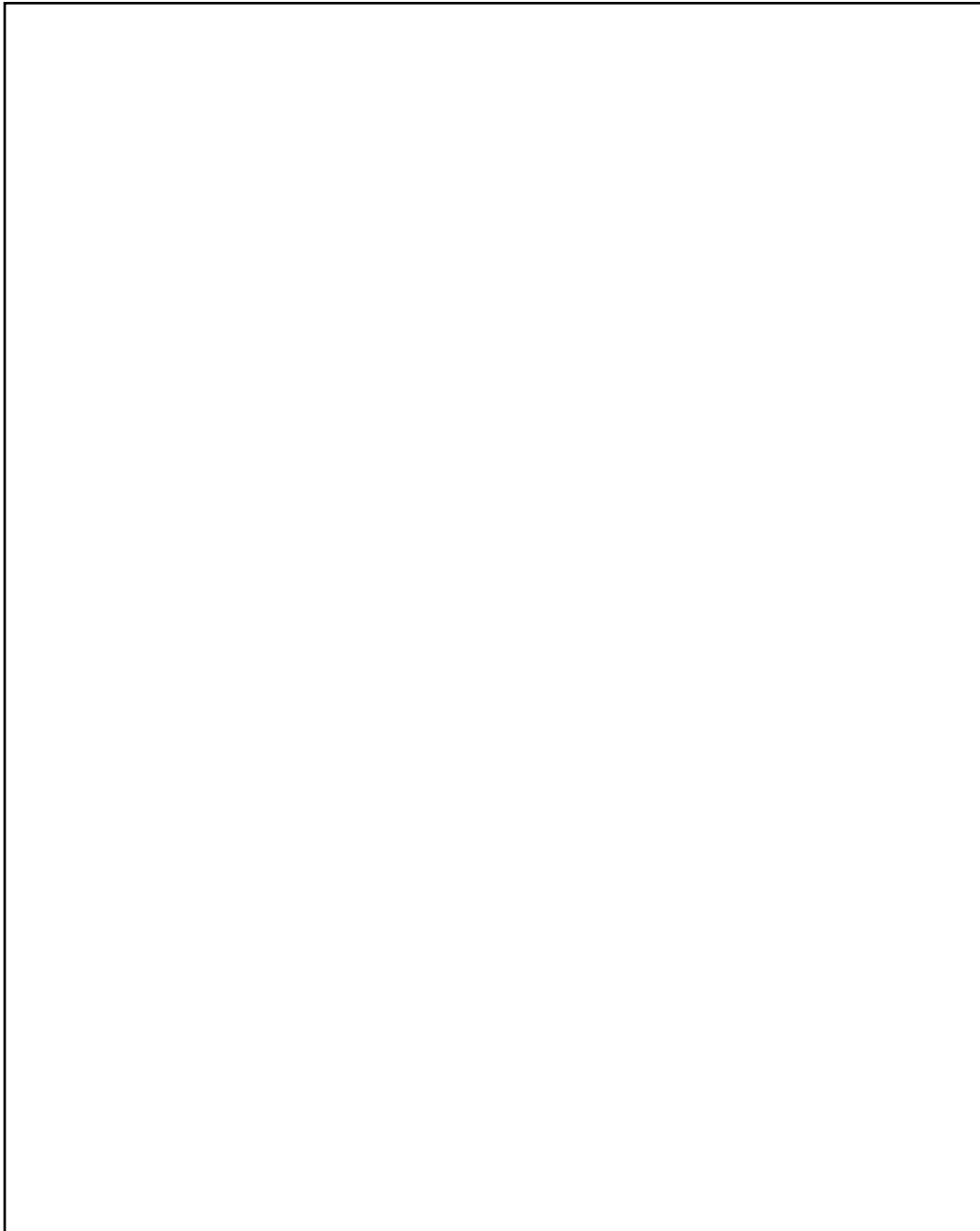
▼

Please select the checkbox below to indicate that the participant has attempted the task but was unable to complete it within the time allowed.

☐ Attempted but unable to complete within the time limit

Trail Making Test (TMT)**Part A: Sample sheet image capture**

AFTER the assessment is completed,
please capture an image of the participant's Sample worksheet below



Trail Making Test (TMT)

Part A: Test sheet image capture

AFTER the assessment is completed,
please capture an image of the participant's Test worksheet below



Trail Making Test (TMT)

Part B: Sample

Place the **Part B Sample** sheet flat on the table directly in front of the participant.
Give the participant a pencil and say:

On this page are some numbers and letters. Begin at 1 [point to 1] **and draw a line from 1 to A** [point to A], **A to 2** [point to 2], **2 to B** [point to B], **B to 3** [point to 3], **3 to C** [point to C], **and so on, in order, until you reach the end** [point to the circle marked 'end']. **Draw the lines as fast as you can. Ready — Begin!**

If the participant completes the sample item correctly in a manner demonstrating that they understand what to do, say:

Good! Let's try the next one. [Mark the checkbox below and proceed directly to the Test trial using the link provided.]



If they can do the task, select the checkbox below and continue.

☐ The participant completed the Part B sample correctly

If the participant makes a mistake on the sample, **immediately** point out the error and explain why it is incorrect.

[Refer to the next page to find examples of possible explanations]

Trail Making Test (TMT)

Part B: Sample

Examples of possible explanations:

1. **You started with the wrong circle. This is where you start** [point to number 1].
2. **You skipped this circle*** [point to the circle the participant omitted]. **You should go from number 1** [point] **to A** [point], **A to 2** [point to 2], **2 to B** [point to B], **B to 3** [point to 3], **3 to C** [point to C], **and so on, in order, until you reach the circle marked 'end'** [point].

* (If it is clear that the participant intended to touch a circle but missed it, do not count it as an omission. Remind the participant, however, to be sure to touch each of the circles when drawing the connecting lines.)

If the participant cannot complete Sample B, take their hand and guide the pencil, using the eraser end, through the trail. Return the pencil to the participant with the point down and say:

Now you try it. Begin at 1 [point to 1] **and draw a line from 1 to A** [point to A], **A to 2** [point to 2], **2 to B** [point to B], **B to 3** [point to 3], **3 to C** [point to C], **and so on, in order, until you reach the end** [point to the circle marked 'end']. **Do not skip around but go from one circle to the next in the proper order. Remember to work as fast as you can. Ready — Begin!**

Repeat this procedure until the participant succeeds [**proceed with the Test trial on the next page**] OR it becomes evident that the participant cannot do the task.



If they cannot do the task, select the checkbox below and discontinue the test.

- ☐ The participant was unable to complete the Part B Sample

Trail Making Test (TMT)

Part B: Test Trail

Place the **Part B Test** sheet flat on the table directly in front of the participant and say:

On this page there are both numbers and letters. Do this the same way. Begin at number 1 [point to 1] **and draw a line from 1 to A** [point to A], **A to 2** [point to 2], **2 to B** [point to B], **B to 3** [point to 3], **3 to C** [point to C], **and so on, in order, until you reach the end** [point to the circle marked 'end']. **Do not skip around but go from one circle to the next in the proper order. Remember to work as fast as you can. Ready — Begin!** [Immediately begin timing]



Watch the participant closely in order to catch any errors as soon as they are made.

If the participant makes an error, **immediately** bring it to their attention and return the participant's pencil to the last correct circle, and continue the test from that point and say something like:

No, go back to here [point to the last correct circle] **and try again.**



Do NOT stop timing while correcting the participant's error.

Errors contribute to the evaluation of the performance principally by increasing the total performance time.

After the participant completes Part B, take the test sheet and record the time to complete on the next page.

Trail Making Test (TMT)

Part B: Scoring

Record the time to complete (in minutes and seconds format) below.
The maximum time allowed for this part is **300 seconds (5 minutes 0 seconds)**.

Part B completion time:

Minutes

▼

Seconds

▼

Please select the checkbox below to indicate that the participant has attempted the task but was unable to complete it within the time allowed.

☐

Attempted but unable to complete within the time limit

Trail Making Test (TMT)**Part B: Sample sheet image capture**

AFTER the assessment is completed,
please capture an image of the participant's Sample worksheet below



Trail Making Test (TMT)

Part B: Test sheet image capture

AFTER the assessment is completed,
please capture an image of the participant's Test worksheet below



Notes

Summary

D-KEFS Letter Fluency Test total correct

--

Trial 1 correct responses

--

Trial 2 correct responses

--

Trial 3 correct responses

--

D-KEFS Category Fluency Test Total correct

--

Trial 1 correct responses

--

Trial 2 correct responses

--

WAIS-IV Coding Total correct

--

WAIS-IV Digit Span Total correct

--

Digit Span Forward

--

Digit Span Backward

--

Trail Making Test (TMT)

Part A sample completed?

--

Part A completion time

--

Part B sample completed?

--

Part B completion time

--

Signature history

Completed and signed by

Name	Date/time (UTC)
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Edited and signed by

Version	Name	Date/time (UTC)
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