

ANZSOM ASM 2024 OCCUPATIONAL COLOUR VISION WORKSHOP

EXERCISE 1: INTERPRETING ISHIHARA PSEUDOISOCROMATIC PLATES

TASK

For each of the Ishihara test result cases provided score the testing and discuss what you would say to this patient.

Candidates for different occupations provided the following test results (provided at your tables) when administered the 24-Plate edition Ishihara Pseudoisochromatic Plates.

- Indicate whether each candidate has passed or failed.
- Comment on the diagnosis and severity of any colour vision defect.
- What other comments or recommendations can be made?

12, 8, 29, 5, 3, 15, 74, 6, 45, 5, 7, 16, 73, 5, 45, 2, 4 Electrician
12, 8, 29, 5, 3, 15, 74, 6, 45, 5, 7, 16, 73, 5, 45, 2, 4 Seafarer
12, 8, 29, 5, 3, 15, 74, 6, 45, 5, 7, 16, 73, 5, 45, 6, 2 Train driver
12, 8, 28, 5, 8, 15, 74, 8, 46, 8, 7, 16, 78, -, -, 26, 42 Pilot
12, 8, 20, 2, 5, 17, 21, 6, -, -, -, -, 5, 45, 6, 2 Policeman
12, 3, 29, 5, 5, 15, 74, 8, 45, 5, 7, 15, 73, -, -, 26, 42 Croupier
No numbers seen on any plate Shop assistant



How to score and apply the Ishihara

1. Use 24-plate edition
2. Number of errors in plates 2 to 13 (or 1-17 for CASA and Australian Maritime Safety Authority)
 - a. Is there >5 errors or
 - b. More errors than in standard?
 - i. CASA (no more than 2 errors)
 - ii. Maritime Safety Authority (2 or less errors)
 - iii. National Transport Commission – Train Drivers (2 or less errors)

Notes

Note: the Ishihara Plates only screen for Deutan and Protan defects (ie identify a defect is present).

- a. They do NOT screen for Tritan defects.
- b. They do NOT provide an indication of severity
- c. They are NOT reliable for differentiating Deutan and Protan

Note: both people with normal and defective colour vision can unconsciously complete partial loops in numbers, calling “3” “8”, “5” “6”, “6” “8”, and “9” “8”. These are still marked as errors but may not be due to the subject’s colour vision deficiency. The tester needs to keep this in mind. Careful analysis of the partial loop error made, compared with the expected normal and defective responses reveals whether these defects are likely to be due to or unrelated to colour vision defects.

Note: people with deutan and protan deutan and protan defects usually make AT LEAST 6 errors. Testers should have a high index of suspicion with workers who score under 5 errors as to whether they do really have a colour vision defect. (This does not mean that one passes people who make less than 6 errors, but it should compel one to give these people further testing to show whether they really do have colour vision defects.)

