NOTE: THE SCRIPTS FOR THIS PARTICULAR TASK IS STILL WORK IN PROGRESS.

Problem Solving Ability

1) Situation-Based Problem Solving

Task Overview

This task measures real-world problem-solving ability, decision-making, and social reasoning in everyday contexts. Participants are presented with short situational scenarios (classroom, social, workplace).

Task Flow

A scenario is shown on screen, followed by four response options. Participants choose one (A–D). The system records their choice , then moves to the next trial.

Population	Scenario	Options (with Scores)
Adolescents (14–18)	You forgot to bring your homework. The teacher asks you about it.What would you do in this situation?	A) Tell the truth and promise to bring it tomorrow (3) B) Make an excuse (“I left it at home”) (2) C) Stay silent and avoid answering (1) D) Blame a friend for distracting you (0)
	A classmate makes fun of your answer during class. How would you respond?	A) Calmly tell them it’s not respectful (3) B) Ignore them and focus on class (2) C) Argue loudly (1) D) Make fun of them back (0)

Adults (18–22)	You are assigned a group project, but one member is not contributing. How would you respond?	A) Talk directly to them and try to solve it (3) B) Do their part silently (2) C) Ignore the issue (1) D) Blame them in front of the teacher (0)
	You see a stranger drop their wallet in a crowded place. What would you do in this situation?	A) Pick it up and return it immediately (3) B) Give it to the police (2) C) Leave it there and walk away (1) D) Keep it for yourself (0)

2) Numerical Problem Solving.

Task Overview

This task measures everyday mathematical reasoning using realistic scenarios such as shopping, budgeting, or expenses.

Task Flow

A short story problem is presented with four numerical options. Participants select the correct answer, and the system records accuracy before moving to the next item.

Adolescents (14–18 years)

Scenario (Shopping Discount):

Riya goes to a bookstore. She buys 2 novels that each cost ₹150 and 1 comic book for ₹100. The shopkeeper gives her a discount of ₹50 on the total bill.

How much does she pay in the end?

Option Answer (₹)

A	300
B	350
C	400
D	450

Correct Answer: B (₹350)

Adults (18–22 years)

Scenario (Monthly Budgeting):
Arjun earns ₹12,000 per month from a part-time job. He spends 40% of his income on rent, 25% on food, and saves the rest.
How much does he save every month?

Option	Answer (₹)
A	3,000
B	4,200
C	4,800
D	7,200

3) Matrix Reasoning Test

Task Overview
This task measures abstract reasoning and pattern recognition using small grids of shapes or lines that follow logical rules.

Task Flow

A grid is presented with one missing element ("?"). Four possible options appear below. Participants select the option that best completes the pattern.

Population	**Grid Structure (Rows x Columns)**	**Item (Stimulus Grid)**	**Options**	**Correct Answer**
Adolescents (14–18 yrs)	2x2	2×2 Grid with Shapes □ □ ○ ?	A) □ B) □ C) ◻ D) ♦	**B (□)** (Circle → Triangle transformation continues → downward triangle)
Adults (18–22 yrs)	2x2	2×2 Grid with Patterns Line ↑ ↘ ?	A) ↙ B) ↑ C) → D) ↔	**A (↙)** (↘ rotated 90° clockwise = ↙)

4) Mental Rotation Task

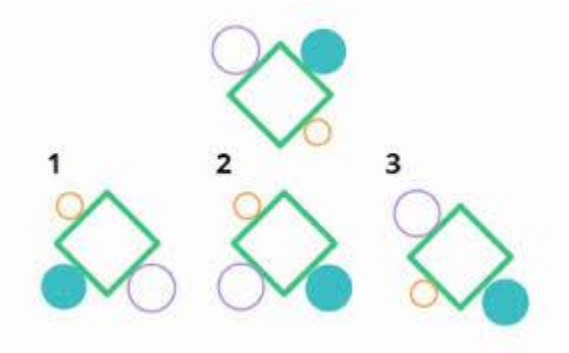
Task Overview

This task assesses spatial reasoning by asking participants to identify rotated versions of a target figure. For adolescents, the figures are 2D shapes. For adults, the figures are 3D objects.

Task Flow

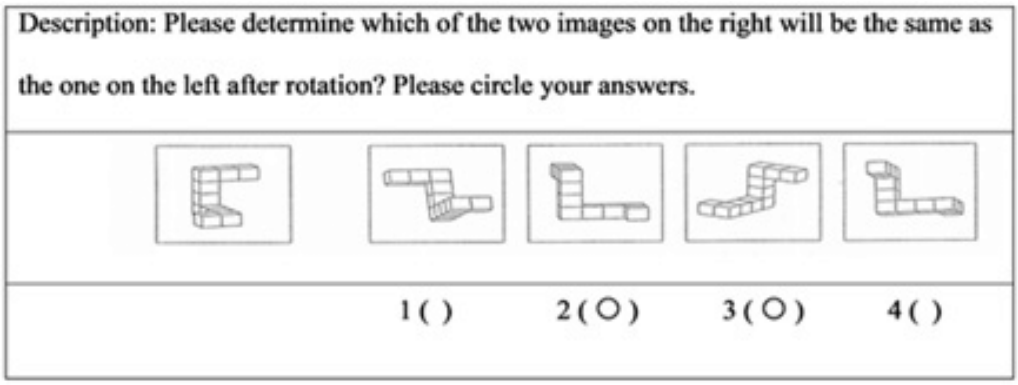
- **Adolescents (2D):** A flat shape (e.g., arrow, letter, polygon) is shown with multiple rotated versions. Participants must choose the correct rotated match.
- **Adults (3D):** A block or 3D figure is shown with multiple rotated versions. Participants select the option that represents the correct 3D rotation.

Adolescents:



Which of the following shows the rotation of the above figure correctly?

Adults:



5) Open Answer-Based Problem Solving

Task Overview

This task captures adaptive and creative problem-solving in real-world contexts where no fixed responses are provided.

Task Flow

A realistic scenario is displayed on screen. Participants type or verbally state their own solution. The response is recorded for later coding and analysis.

Adolescents:

You are cycling to school and see a stray dog following you. It doesn't seem aggressive, but you are feeling nervous. *What would you do?*

Adults:

You're in the middle of an important online test, and your internet suddenly disconnects. *What steps would you take immediately?*

Scoring Instruction Manual

1) Situation based Problem Solving

- Data to record: Participant's chosen option (A–D).
- Scoring: Assign scores according to predefined values per option (e.g., A=3, B=2, C=1, D=0).
- Total Score: Sum scores across all questions for overall social reasoning performance.

2) Numerical Problem Solving

- Data to record: Participant's selected answer (A–D).
- Scoring: Assign 1 for correct answer, 0 for incorrect.
- Total Score: Sum scores across all questions

3) Matrix Reasoning Test

- Data to record: Participant's selected option (A–D) for missing element.
- Scoring: Assign 1 point for correct choice, 0 otherwise.
- Total Score: Sum scores across all questions

4) Mental Rotation Task

- Data to record: Participant's chosen rotated figure (A–D).
- Scoring: Assign 1 for correct selection, 0 for incorrect.
- Total Score: Sum scores across all questions

5) Open Answer-Based Problem Solving (Not ready yet)

- Data to record: Participant’s written or verbal response.
- Scoring: Responses coded by trained raters based on pre-defined criteria for creativity, relevance, and completeness (e.g., scoring scale 0–3).
- Total Score: Average or sum of coded scores across open-ended problems.