ICAN

International Common Assessment of Numeracy

An open-source assessment developed through a south-south collaboration and aligned to SDG 4.1.1 (a)

Current context & the deepening learning crisis

The COVID-19 pandemic has impacted societies across the planet. To help contain the spread of the virus, schools around the world have closed affecting over 1.5 billion learners.

Before the shock created by this pandemic, around 260 million children, adolescents and youth were already out of school. Even among those who were enrolled, large proportions of children were not acquiring even foundational reading and numeracy skills.

School closures and other disruptions due to the pandemic will lead to further learning loss, increased dropouts and higher inequality. While children are out of school, almost all learning assessments have come to a halt, exacerbating the challenge of obtaining reliable data on learning, particularly for the most marginalized.

Fueling the SDG promise

Learning outcomes feature prominently in Sustainable Development Goal (SDG) 4. Target 4.1 states: "By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes." Despite the SDG push, school closures due to COVID-19 are likely to reverse any gains made to date, especially for younger children. If foundational skills are not built at the early stage, the likelihood of meaningful progression through elementary education is low.

To identify existing gaps at the early stage, SDG 4.1.1 (a) measures the proportion of children in grades 2 or 3 achieving at least a minimum proficiency level in reading and mathematics. Monitoring progress under this indicator requires robust, regular, and comparable assessments of children's foundational learning outcomes (both within a country over time as well as cross-nationally).
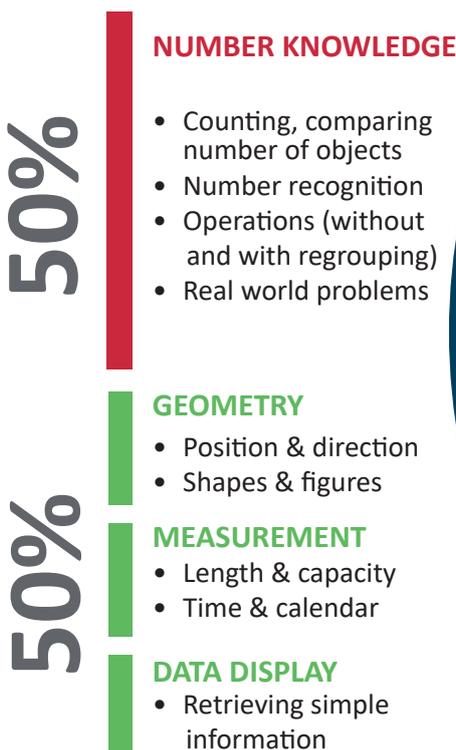
International Common Assessment of Numeracy

ICAN is an open-source, robust and easy-to-use assessment tool, available in 11 languages, that offers international comparability of results aligned to SDG 4.1.1 (a). ICAN was developed through a collaborative effort between PAL Network member organizations in 13 low and middle-income countries across Africa, Asia and America.

Urgent need for assessments to focus on foundational learning at the early stage

All education systems expect children to acquire foundational abilities of reading and numeracy in the first few years so that they can negotiate more difficult content as they progress to higher grades. In most contexts, classroom teaching is guided by the need to cover an ambitious curriculum. Although large proportions of children lag behind curriculum expectations, they are rarely offered a chance to catch up.

COVID-19 may cause foundational learning to decline even further among children in early primary grades due to unavailability of support at home, especially in less affluent households.

Domains & tasks in ICAN

50%

NUMBER KNOWLEDGE

- Counting, comparing number of objects
- Number recognition
- Operations (without and with regrouping)
- Real world problems

50%

GEOMETRY

- Position & direction
- Shapes & figures

MEASUREMENT

- Length & capacity
- Time & calendar

DATA DISPLAY

- Retrieving simple information

What does ICAN measure?

There is widespread agreement that foundational numeracy includes domains such as number knowledge, geometry, measurement and simple data display.

The minimum proficiency level descriptor for numeracy under SDG 4.1.1 (a) for grades 2/3 also requires students to demonstrate skills in number sense and computation, shape recognition and spatial orientation.

ICAN assessment tasks are aligned to UNESCO's Global Proficiency Framework that defines the minimum proficiency levels that learners are expected to demonstrate.

How & where has ICAN been implemented ?

ICAN is suitable for use in school or household settings. A large-scale proof of concept has been implemented. Data collection procedures were based on **PAL Network's Data Quality Standards Framework** that ensures alignment to global best practices in assessment.

Conducted in 13 countries. 60 randomly sampled communities in 1 rural district per country

Administered in randomly sampled households to children in the age-group of 5-16 years

Each child assessed orally, one-on-one, so as not to assume that they can read or write

Information on children's schooling status, parents' education and household and community infrastructure was collected to understand equity issues

ICAN reach and implementing organizations

America
Mexico
Nicaragua

West Africa
Mali
Nigeria
Senegal

South Asia
Bangladesh
India
Nepal
Pakistan

East and Southern Africa
Kenya
Mozambique
Tanzania
Uganda

ICAN Coverage

3 continents	**13** countries	**13** rural districts	**779** villages	**15,000+** households	**20,000+** children

Key facts about the ICAN assessment tool

- Open source; currently available in 11 languages

- Most tasks are aligned to grade 3-level or lower of the UNESCO Global Proficiency Framework

- Feasible for use in household-based assessments as well as in school settings

- Suitable for a broad age group of learners, in order to identify gaps in numeracy

- Oral and one-on-one administration to include all children, even those who are not yet fluent readers

- Average administration time of 15 minutes per child

- Progressive assessment administration-only children who can do easier number operation tasks are given more advanced tasks

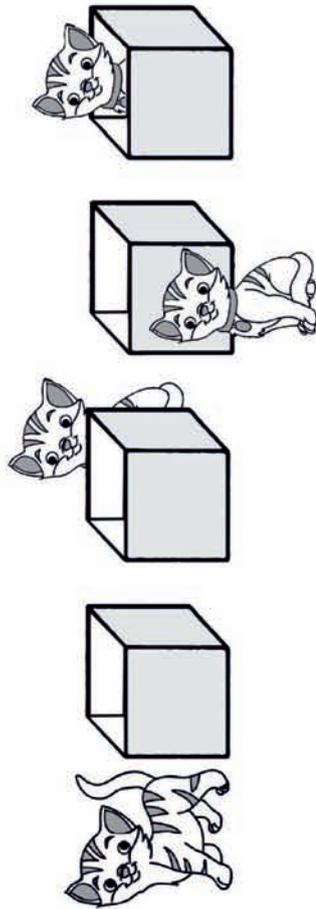- Feasible to be implemented on large scale in low resource settings

ASER BANGLADESH · ASER Evidence for Action · ASER NEPAL · ASER PAKISTAN · Beekunko · JÄNGANDOO · LEARNigeria

MIA · MEDICIÓN INDEPENDIENTE Aprendizajes · TPC · uwezo TANZANIA · uwezo UGANDA · VIdA · Zizi Afrique Foundation

ACCESSIBLE AND FEASIBLE

INTERNATIONALLY COMPARABLE

ICAN

ROBUST

RELEVANT

SET 1

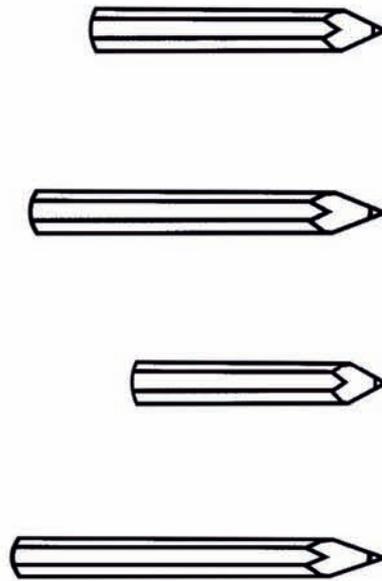**Q1** In this picture, which cat is inside the box?

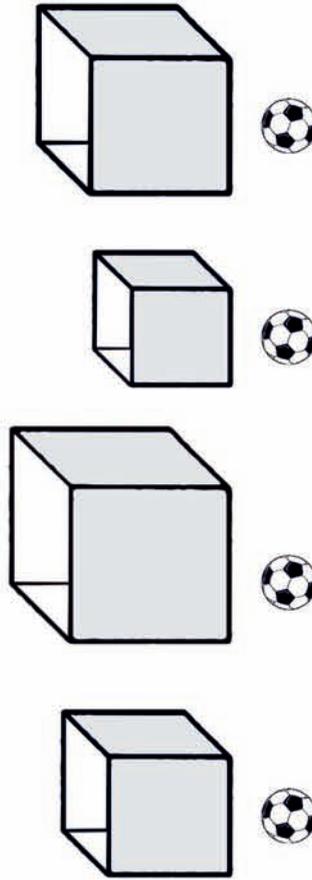**Q2** In this picture, which child is farthest from the tree?

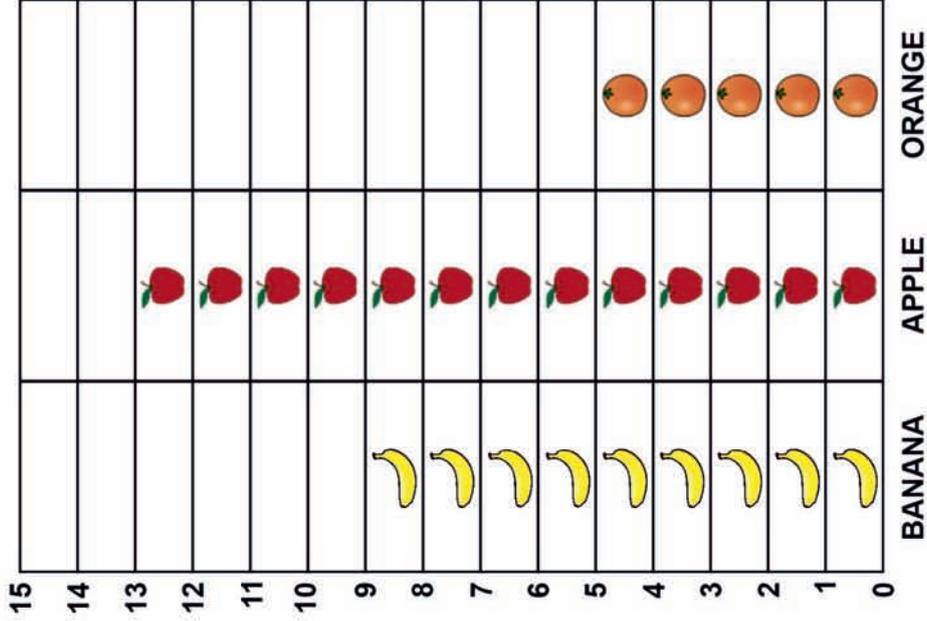**Q3** In this picture, which is the shortest pencil?

Q4 Here are 4 balls of the same size. Now look at the box kept next to each ball. If we completely fill each box with the kind of balls shown, which box will have the most number of balls?

1

PAL NETWORK
People's Action for Learning

SET 1

Q7, Q8

What is the time in this clock?

Q7

Q8

Q5, Q6

Look at the chart given below carefully.

	BANANA	APPLE	ORANGE
15			
14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			
0			

Q5 How many apples are there?

Q6 How many more bananas are there than oranges?

Q9, Q10
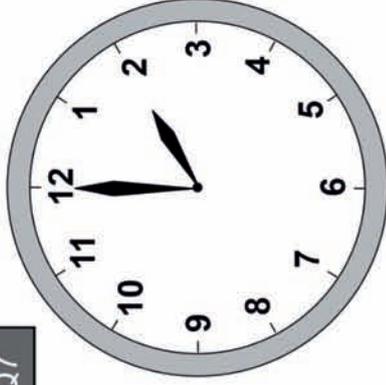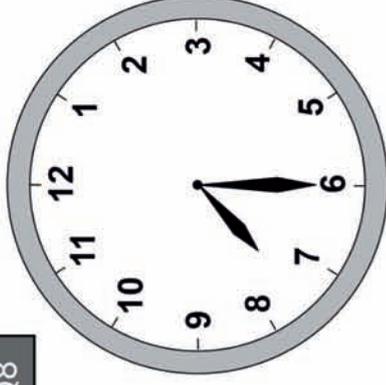
Look at the calendar given below.

MARCH 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Q9 What is the day on 5th March?

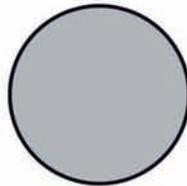**Q10** What is the date on the second Monday of March?
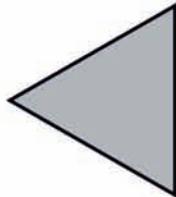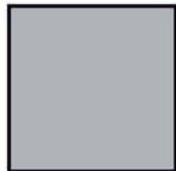
SET 1

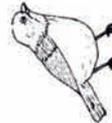**Q11** Which of these is a straight line?

Q12 Look at these shapes. Which of these is a triangle?

Q13 How many birds are here? Choose the correct number.

6   8   9   5

Q14 There are 4 groups of objects given here. Look at them carefully. Which group has the most number of objects?

3

SET 2

Q15 Recognize numbers.

3	8	2
0		9

At least 4 out of 5 numbers must be correct

Solve the following questions.

Q16
$$32 + 15$$

Q17
$$46 - 21$$

Q18
$$2 \times 4 =$$

Q19
$$9 \div 3 =$$

SET 3

Q20 Recognize numbers.

48	84	22
97		30

At least 4 out of 5 numbers must be correct

Solve the following questions.

Q21
$$56 + 17$$

Q22
$$78 - 29$$

Q23
$$42 \times 6$$

Q24
$$7 \overline{)93}$$

Q25 Listen to the question carefully, solve and answer.

There were 43 children in the park. Out of these, 25 of them have gone home. How many children are left in the park now?

Q26 Listen to the question carefully, solve and answer.

A shopkeeper has 48 apples. He keeps 3 apples in each box. How many such boxes will he need to keep all the apples?

About PAL Network

The People's Action for Learning Network (PAL Network) is a south-south partnership of organisations working across three continents. Member organisations conduct citizen-led assessments and/or citizen-led actions aimed at improving learning outcomes. From 2005 onwards, members of this network have focused on measuring whether children in the elementary school age group can read basic text and do simple arithmetic. In many cases PAL members also implement action programs aiming to ensure that all children acquire these foundational skills.

Citizen-led assessments are oral assessments, done in the household and conducted one-on-one with each child. These assessments are usually conducted with a representative sample of children at provincial/state or national levels and repeated periodically over time. These efforts are led by academic institutions or civil society organizations and include participation by a wide range of local actors.

To find out more, please visit :

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