

REPORT

MATHEMATICS WEBINAR

CONDUCTED BY: HRDC DPSS

ATTENDED BY: Ms. Khushboo Chhabra

DATE: 3rd Feb to 5th Feb 2021

TIME: Session 1 (10:30 am to 12:30 pm)

Session 2 (2:00 pm to 4:00 pm)

HRDC DPS Society organized an online training session on Mathematics for teachers teaching Grade 3 to Grade 8, from 3rd February to 5th February 2021. This session focused on how teachers can design activities to promote students' curiosity and help them see how Mathematics is an integral part of the world we live in.

The moderator of the event, Ms. Vanita Sehgal, Executive Director HRDC DPSS, started the session by addressing the participants and shared her experience of how her Mathematics teacher had helped in building her interest in this subject.

DAY 1:

Key Panelists:

DR. SHIKHA TAKKER

Assistant Professor, Hyderabad Campus TISS- Azim Premji School of Education

DR. SHWETA NAIK

Scientific Officer, Homi Bhabha Centre For Science Education, Mumbai

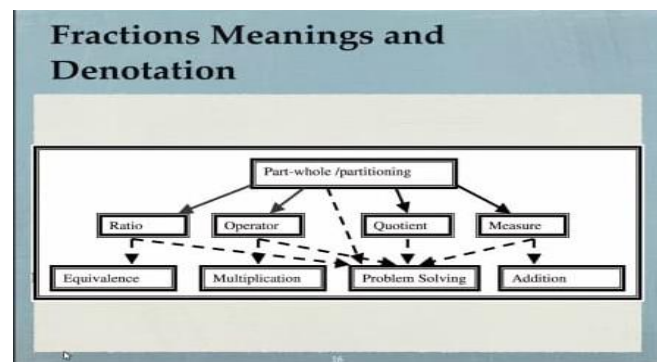
The panelists beautifully explained in detail the fundamental concepts and need of 'Fractions' and 'Decimals' by taking real life examples. They emphasized on the importance of reviewing common errors made by the students in order to enhance their thinking skills and thus strengthening their concepts. They also stressed upon the fact that teachers should know what students are thinking and hence diagnose problems, if any.

Whole number thinking and decimal learning

* Study the two sets of decimal comparison problems.

Set A	Set B
1.2 and 1.23	1.2 and 1.13
0.56 and 0.42	0.9 and 0.56
12.5 and 12.55	12.05 and 12.5
3.60 and 3.5	3.06 and 3.7
0.8 and 0.9	0.81 and 0.9

* What would be a consistent explanation for comparing all the problems?



DAY 2:

Key Panelists:

DR. RUCHI KUMAR

Assistant Professor, Mumbai Campus Centre for Education Innovation and Action Research

MS. JEENATH KHAN

Research Scholar, Homi Bhabha Centre For Science Education, Mumbai

On Day 2, the topics for discussion were 'Integers' and 'Geometry'. The session began by showcasing research on the common errors made by the students, through a video presentation. The research focused on the reasoning given by the students behind those errors. The purpose of the video was to encourage teachers to analyze students' thinking and hence find a way to correct the same, if so required. They suggested various online platforms/websites like Phet, Geogebra, Enrich etc and introduced various digital games which can help in making learning more effective and enjoyable for the students.

Using integer mall as context

1. How do you number the floors above and below the ground
2. • The car parking is ___ floor(s) ___ (up/down) from the book store.
3. • After watching a 3-D movie and you want to play video games. You will go ___ floor(s) ___ (up/down) to reach the video game parlor.
4. • You pressed the lift buttons randomly in the following sequence. '+ + - - -'. Which floor will you reach if you started on the ground floor? Can u write in mathematical expression

The diagram shows a 3D mall with floors labeled: TOYS, VIDEO, GYM, and LIFT. The ground floor is labeled 'GROUND FLOOR'.

Paper-prototype-1

Digital-prototype-1

Present Version

The collage shows a paper prototype of a game board with geometric shapes, a digital prototype of the same game on a screen, and a photo of a person playing the game.

DAY 3:

Key Panelists:

DR. RAKHI BANERJEE

Faculty, Azim Premji University

MS. VIDYA VIKRAM

Vedic Math Expert, Founder- Skills on Biz

On Day 3, the panelists talked about 'Algebra' and 'Vedic Math'. The session was based on the utility of these two topics in real life. As rightly said, 'The best always comes last', the panelists suggested various exercises/tasks which can be incorporated in classrooms to strengthen students' thinking. It was aptly quoted, 'Mathematics classroom requires talking with the child and not just solving the questions'. Various Vedic Math techniques were introduced in order to facilitate students to do complex calculations quickly and accurately.

Vedic Maths Challenge - V

Multiply the number 457 by 99999

Consider 00457×99999

- First part of answer is $00457-1 = 456$
- Next part - do all from 9 last from 10 for 00457

$$\begin{array}{r} 99999 \\ 00457 \\ \hline 99543 \end{array}$$

$457 \times 99999 = 45699543$

EQUATION - BALANCE

Equivalent equations – no change in balance
Every subsequent step of equation will lead to the same solution as the given equation

$2x + 3 = 15$
 $2x + 3 - 3 = 15 - 3$
 $2x = 12$
 $x = 6$

$5x - 9 = 2x + 18$
 $5x - 9 + 9 = 2x + 18 + 9$
 $5x = 2x + 27$
 $5x - 2x = 2x + 27 - 2x$
 $3x = 27$

Overall, it was a great learning experience. It provided useful insights into the key elements of various Mathematical topics, in depth.