



**KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)**

DEPARTMENT OF MATHEMATICS

ACTIVITIES CONDUCTED

UNDER

DBT STAR COLLEGE SCHEME- 2022-2023

MODELS





ALGEBRA

$$\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$$

$$\log_a x = \frac{\log_b x}{\log_b a}$$

$$\int \log x \, dx = x \log x - x + C$$


$$\int \frac{1}{a+x} dx = \ln|a+x| + C$$

$$\int \frac{1}{x} dx = \ln|x| + C$$

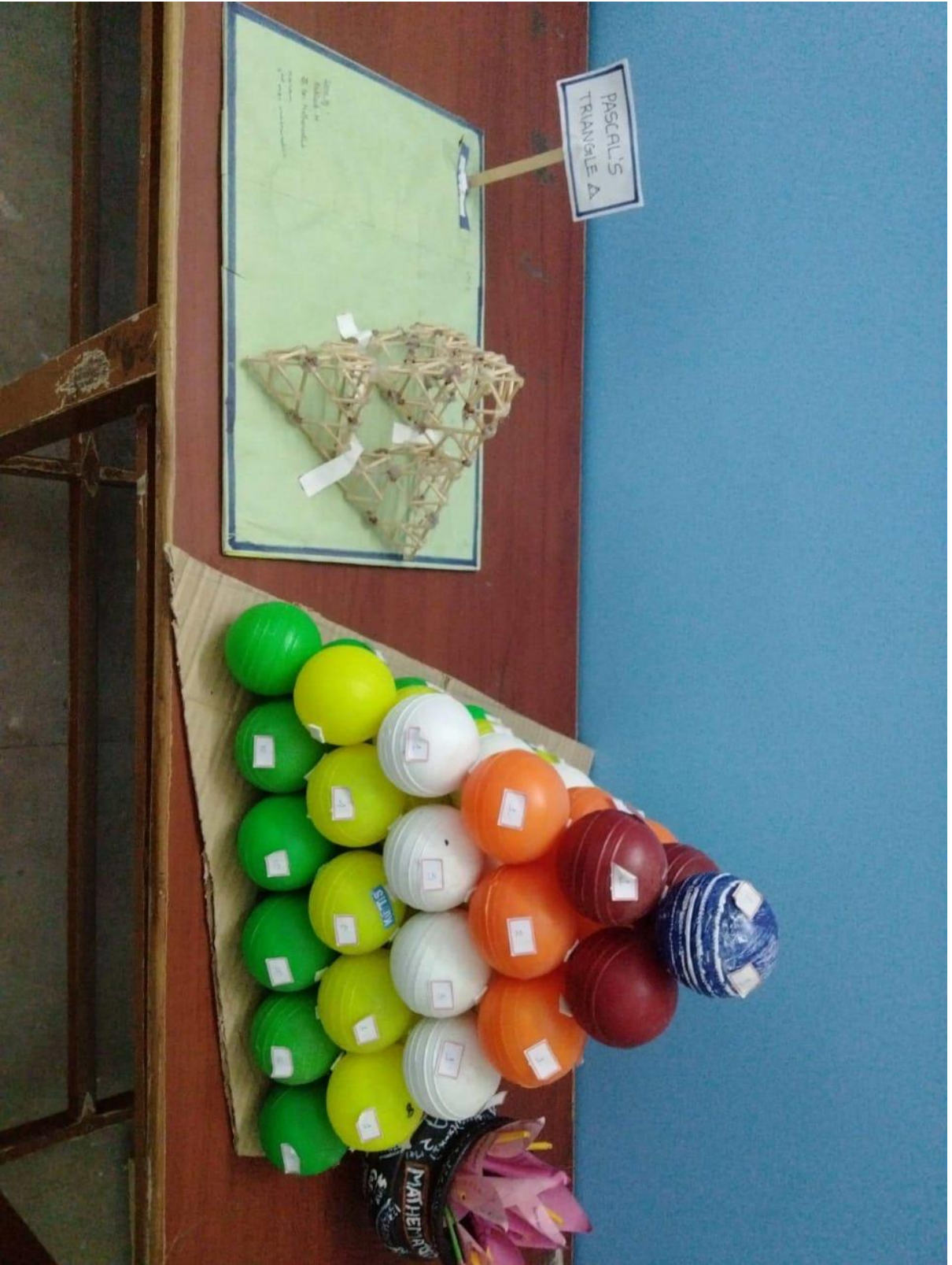
$$\int \frac{1}{a^2 + b^2 x^2} dx = \frac{1}{b} \arctan\left(\frac{bx}{a}\right) + C$$

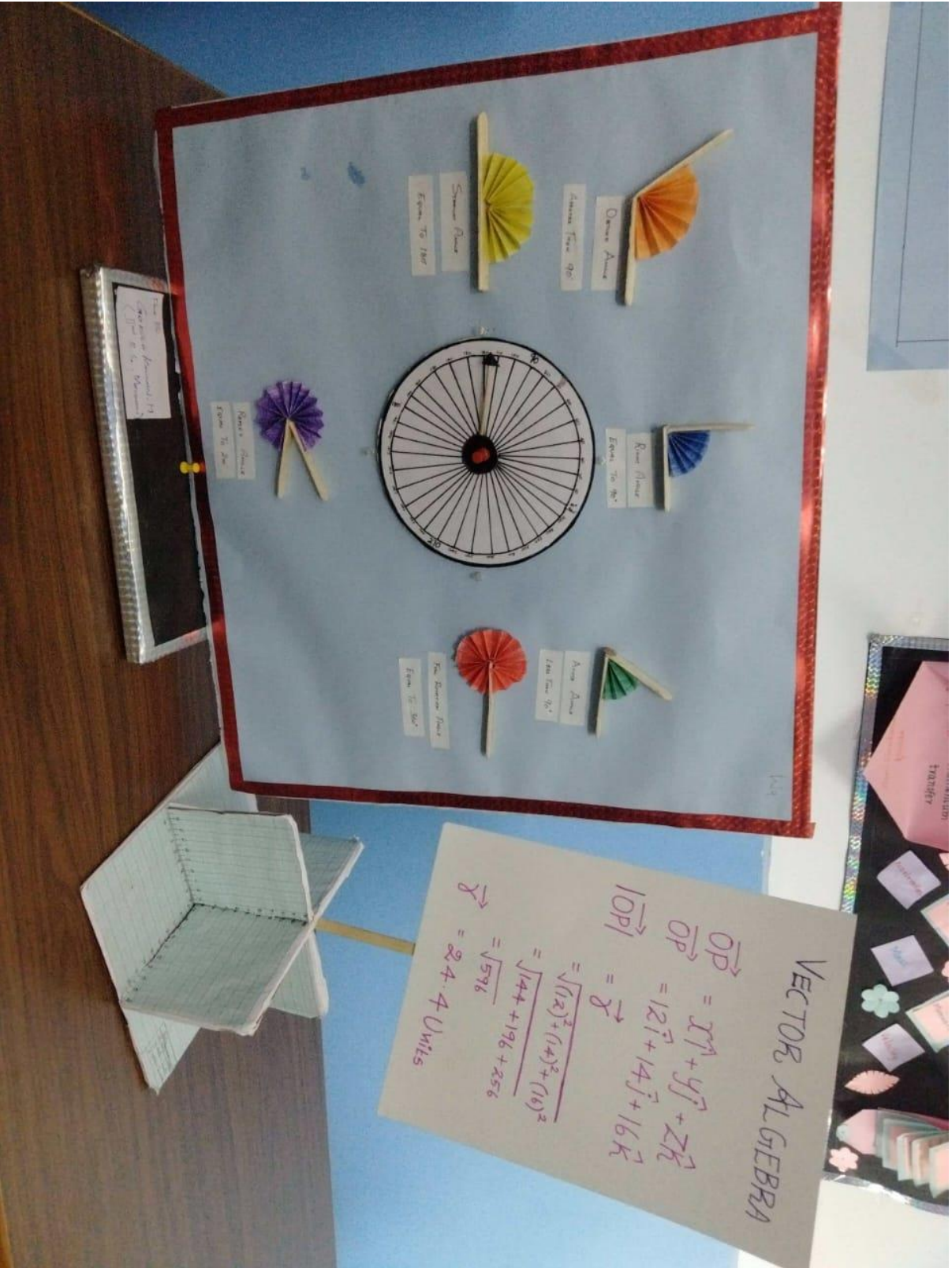
Electric Plugs Four Sided

1 CM	=	10 DM
1 M	=	100 CM
1 FOOT	=	12 INCHES
1 INCH	=	2.54 CM
1 KILO	=	1000 G
1 POUND	=	16 OUNCES
1 MILE	=	1.61 KM
1 Gm	=	1000 Mg



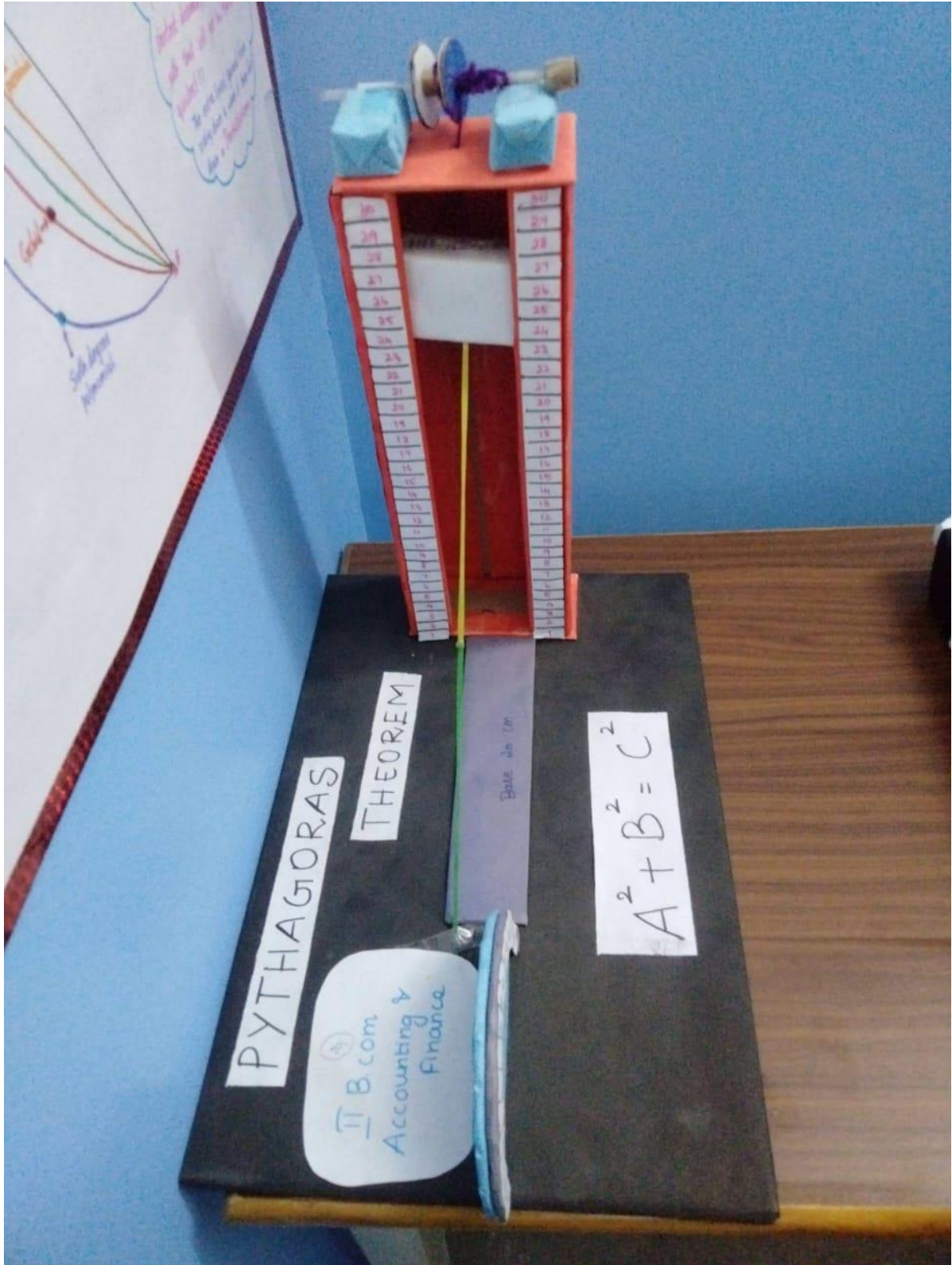
Sin θ	hypotenuse opposite
Cos θ	hypotenuse adjacent
Tan θ	opposite adjacent
Csc θ	hypotenuse opposite
Sec θ	hypotenuse adjacent
Cot θ	adjacent opposite





VECTOR ALGEBRA

$$\begin{aligned} \vec{OP} &= x\hat{i} + y\hat{j} + z\hat{k} \\ |\vec{OP}| &= 12\hat{i} + 14\hat{j} + 16\hat{k} \\ &= \vec{r} \\ &= \frac{\sqrt{(12)^2 + (14)^2 + (16)^2}}{\sqrt{44 + 196 + 256}} \\ &= \sqrt{596} \\ &= 24.4 \text{ Units} \end{aligned}$$



PYTHAGORAS
THEOREM

II B com
Accounting &
Finance

Base

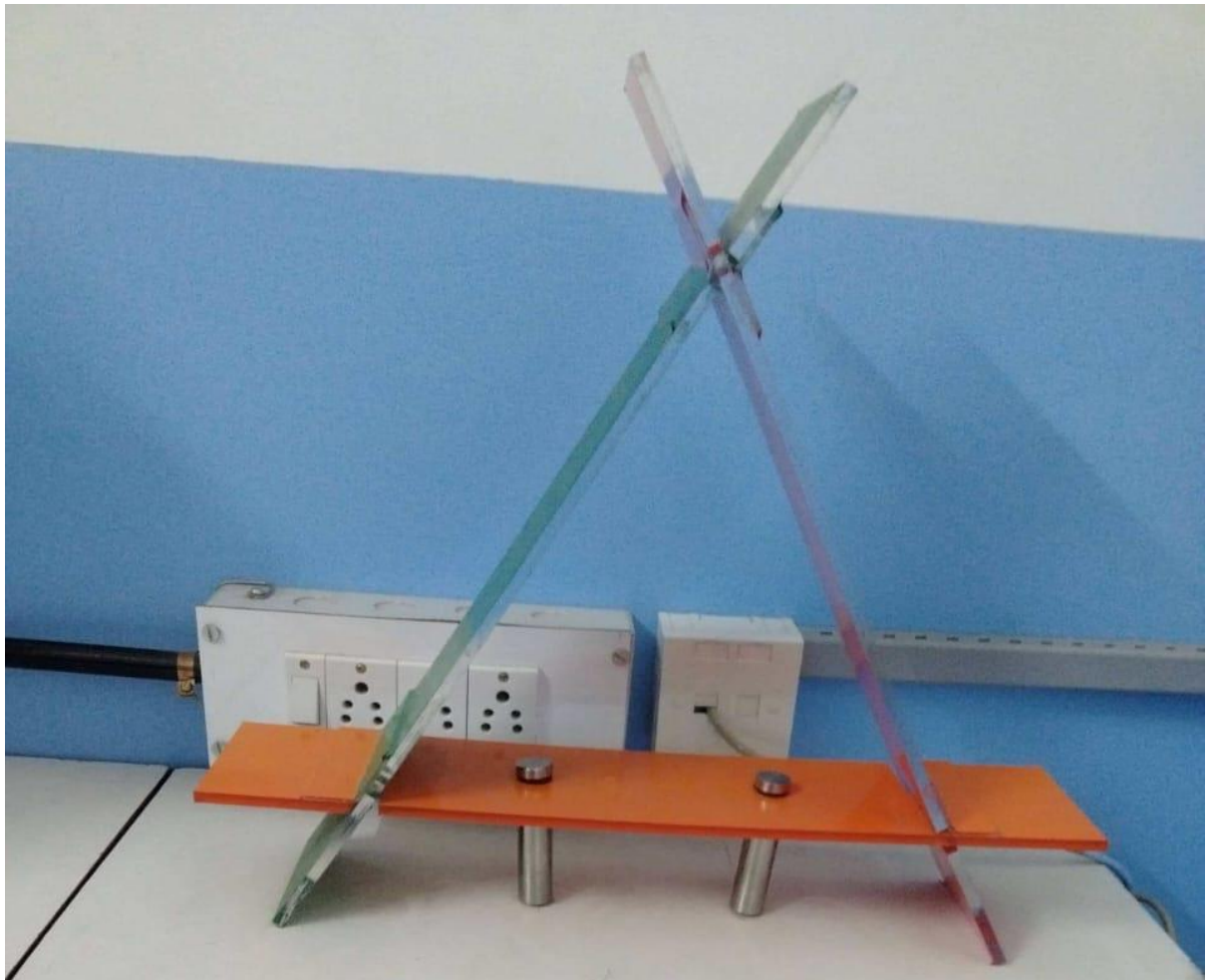
$$A^2 + B^2 = C^2$$

BRACHISTOCHRONE CURVE MODEL









**FINITELY MANY
SOLUTIONS**

HRD-11011/30/2021-HRD-DBT

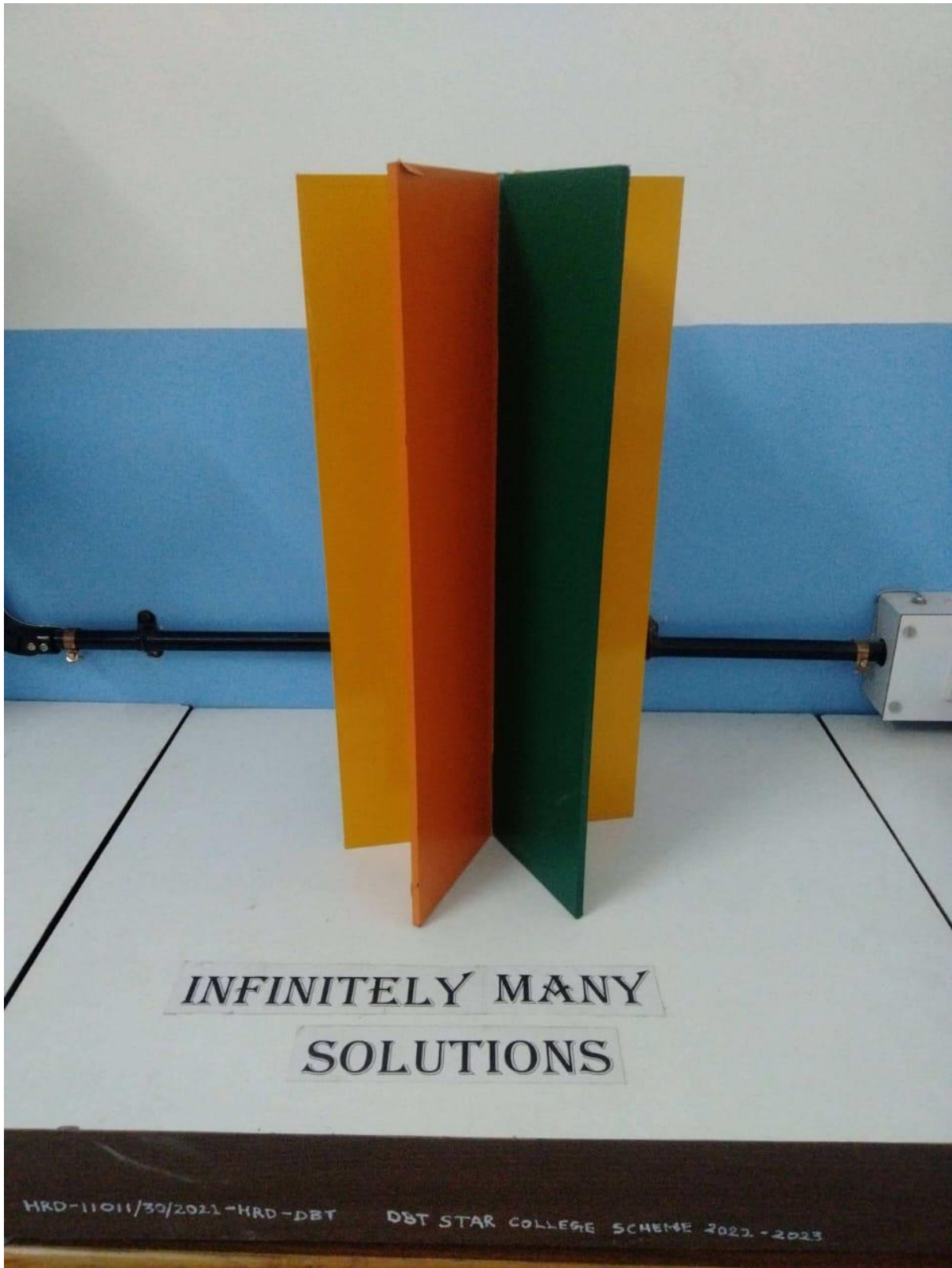
DBT STAR COLLEGE SCHEME 2022-2023

The area of the square whose side is hypotenuse(c) is equal to the sum of the area of the squares on the other two sides (A and B)

solutions of the given linear equations
* Finally we get a finite no of the system of linear equations.

PYTHOGORIAN MODEL



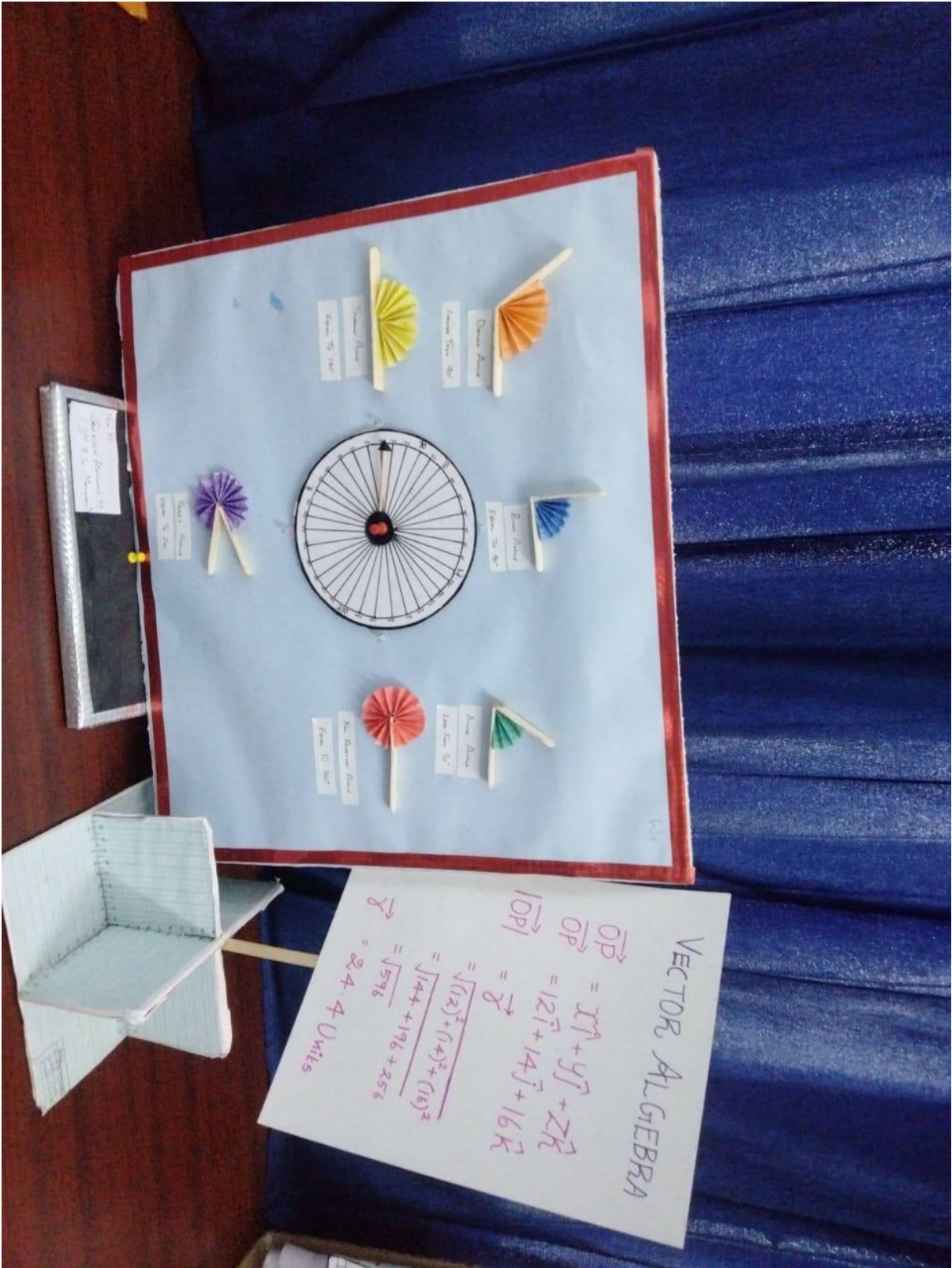


INFINITELY MANY

SOLUTIONS

HRD-11011/30/2021-HRD-DBT

DBT STAR COLLEGE SCHEME 2022-2023



VECTOR ALGEBRA

$$\vec{OP} = x\vec{i} + y\vec{j} + z\vec{k}$$

$$|\vec{OP}| = \sqrt{12^2 + 14^2 + 16^2}$$

$$= \sqrt{(12)^2 + (14)^2 + (16)^2}$$

$$= \sqrt{144 + 196 + 256}$$

$$= \sqrt{596}$$

$$= 24.4 \text{ Units}$$


- Orange Area
Date: 10/10/20
- Yellow Area
Date: 10/10/20
- Blue Area
Date: 10/10/20
- Purple Area
Date: 10/10/20
- Red Area
Date: 10/10/20
- Green Area
Date: 10/10/20

Handwritten notes on a small board to the left of the main display.





UNIQUE SOLUTION

HRD-11011/30/2021-HRD-DBT DBT STAR COLLEGE SCHEME 2022-2023