



**M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE**  
(Affiliated to Thiruvalluvar University)  
**HAKEEM NAGAR - MELVISHARAM- 632 509**  
Walaja Taluk, Arcot Block Phone: 04172 266167, 266463  
Email:mmeswc@yahoo.in website:www.mmeswc.edu.in




**"Awareness Programme for school students" held on 23<sup>rd</sup> April 2022 at Government Girls Higher Secondary School, Arcot.**

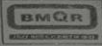

**Field Visit Report**

The M.M.E.S women's Arts & Science College, Department of Mathematics had organized "Awareness Programme for school students" on 23.04.2022. Around 5 students and 5 staffs participated in this programme. During this programme, our college students presented charts to understand the concept and explain them and staffs deliver special lectures to the X, XI & XII class approximately 450 students.

**Permission letter to visit the school**

 **M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE**  
(Affiliated to Thiruvalluvar University)  
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**Dr. Freda Gnanaselvam** M.B.A., M.M.M., M.Phil., Ph.D.,  
Principal

Date : 26/03/2022

No. MMES / Field visit/ 2022/392

To,  
The Headmistress,  
Government Girls Higher Secondary School,  
Arcot - 632 503

**Respected Madam,**

Greetings from M.M.E.S. Women's Arts and Science College.

Our student wants to motivate, and teach shortcut tricks, and remove anxiety of Mathematics among the students. So kindly grant us permission to visit to your school for one day. Let us know your convenient date and time so as to visit your school.

Thanking you.

Yours Sincerely

Principal  
**Dr. Freda Gnanaselvam, Ph.D.,**  
Principal  
M.M.E.S. Women's Arts & Science College  
Melvisharam - 632 509

*Dr. Freda*  
25/4/22

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Dr  
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### M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE

(Affiliated to Thiruvalluvar University)

HAKEEM NAGAR - MELVISHARAM- 632 509

Walaja Taluk, Arcot Block Phone:04172 266167, 266463

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22.04.2022

To

The correspondent,  
M.M.E.S Women's Arts & Science College,  
Melvisharam-632509.

Respected Sir/ Madam

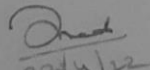
Sub: Requesting to visit the school-reg

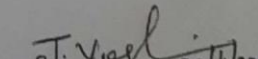
We require transportation facility to visit Government Girls Higher Secondary School, Arcot on 23.04.2022 at 1:30 p.m to 2.30 p.m.5 PG students will be accompanied by 5 staff member. We are going to teach the short tricks and importance of Mathematics to the students and to create awareness of the Mathematics.

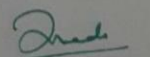
Outcome of Visit

- Increase enrolment of students in Mathematics department.
- For inclusion in NAAC requirement.

Correspondent

  
22/4/22  
Principal

  
22/4/22  
Head of the Department

  
25/4/22

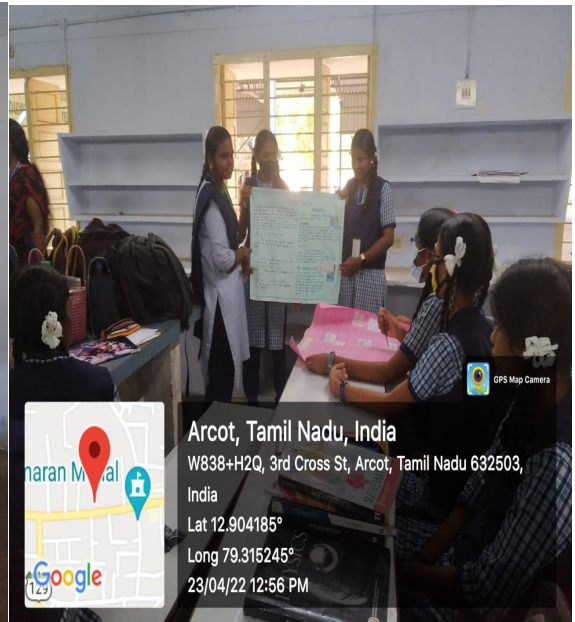


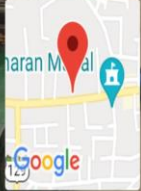
School Entrance



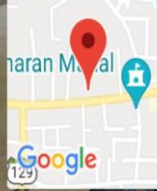
Inside the School

**Our college students presented the charts to the students and explain about the short tricks of mathematics,importance of mathematics in our day to day life and create awareness to the students about how mathematics is used in all the fields.**

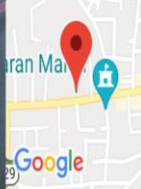




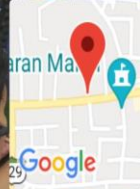
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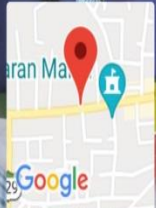
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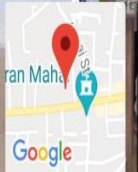
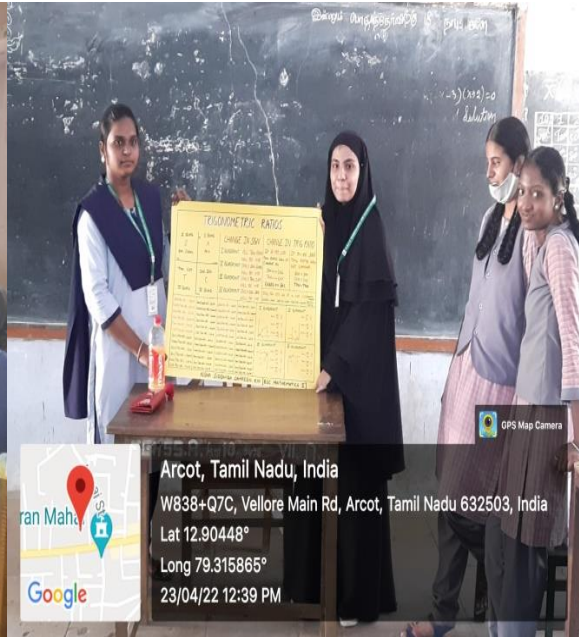
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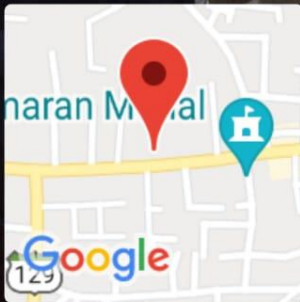
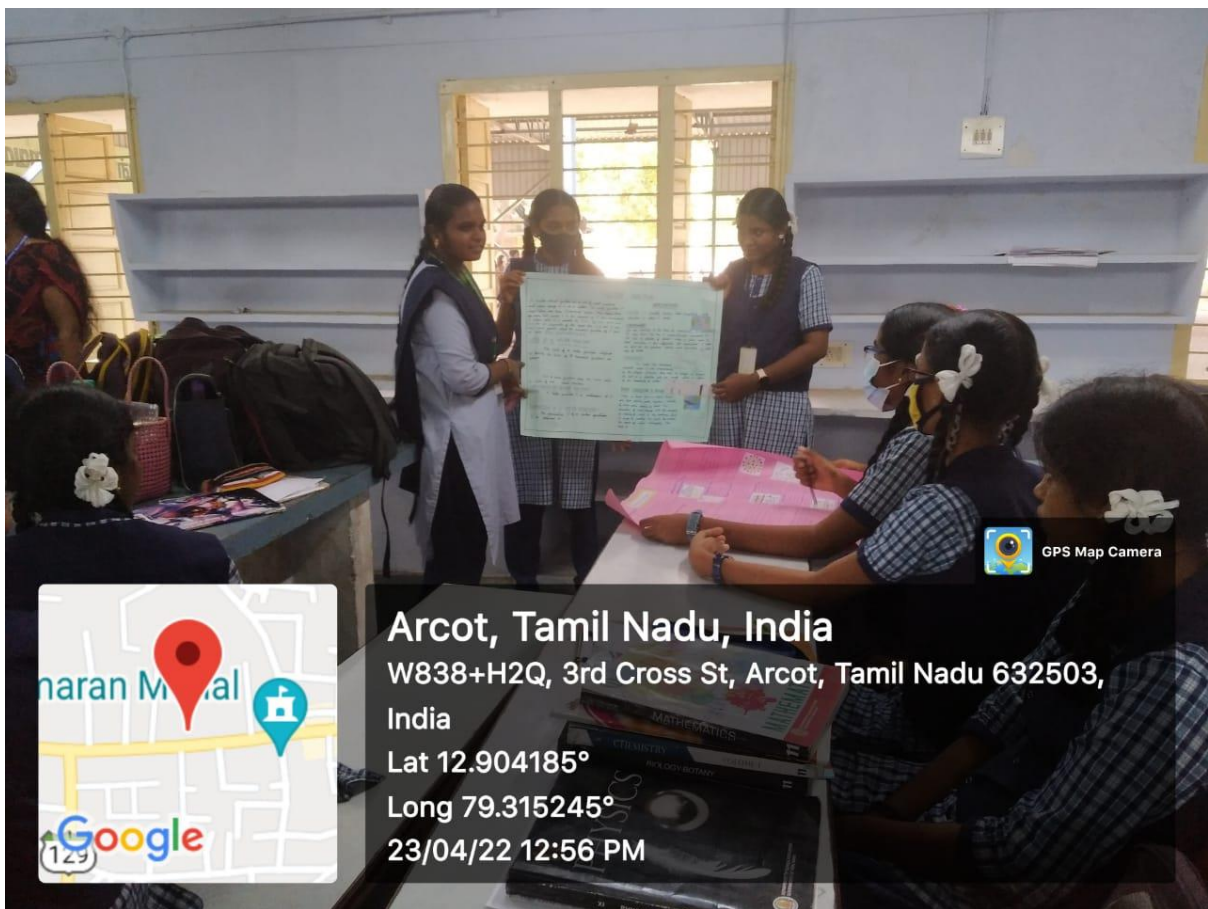
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**Arcot, Tamil Nadu, India**  
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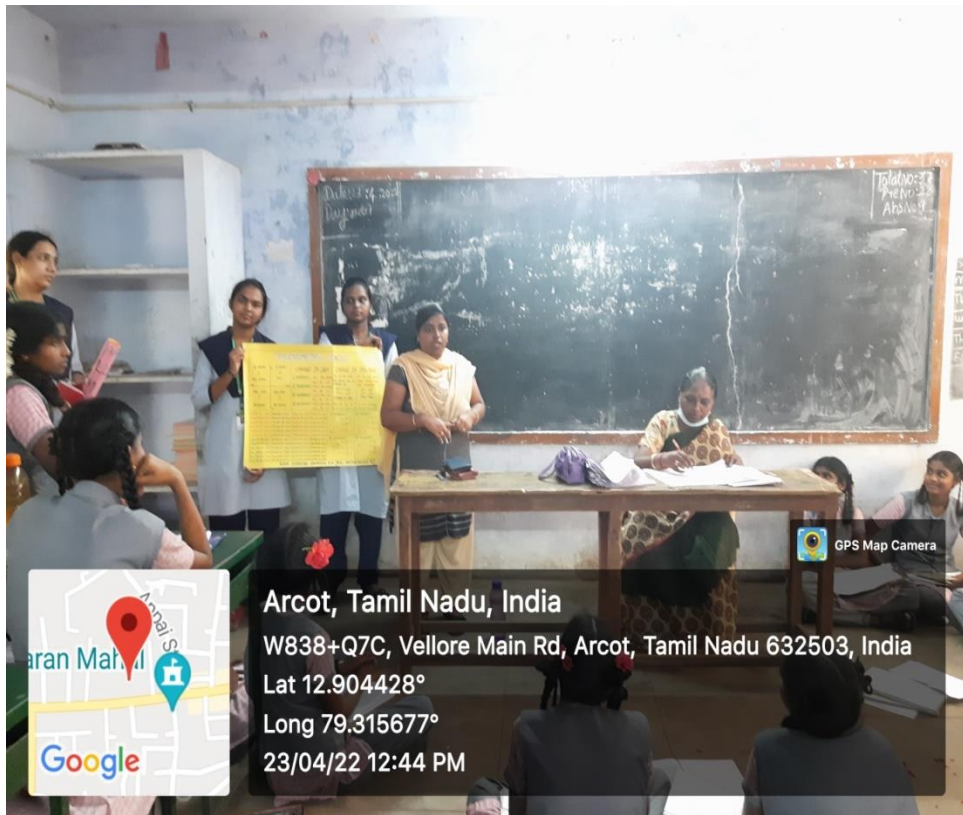


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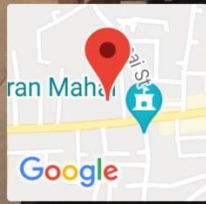
**Arcot, Tamil Nadu, India**  
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**Our staffs deliver special lecture to the school students (450 students approximately ) to motivate and remove anxiety of Mathematics from the students.**

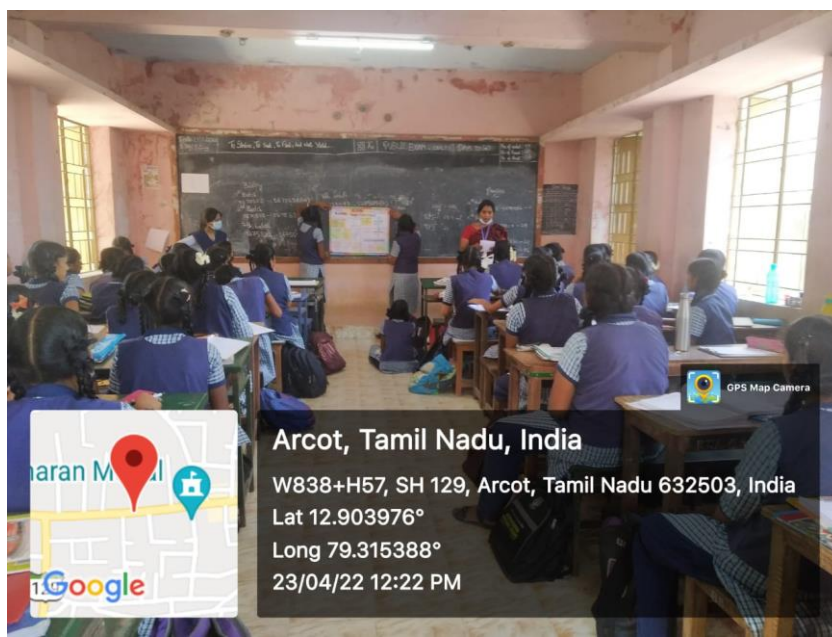








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## Formula book



### MATHEMATICS FORMULAE

#### TRIGONOMETRY

$\theta$	Degrees	$0^{\circ}$	$30^{\circ}$	$45^{\circ}$	$60^{\circ}$	$90^{\circ}$	$180^{\circ}$	$270^{\circ}$	$360^{\circ}$
	Radian	$0^0$	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	$\pi$	$3\frac{\pi}{2}$	$2\pi$
$\sin \theta$		0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1	0	-1	0
$\cos \theta$		1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0	-1	0	1
$\tan \theta$		0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	$\infty$	0	$-\infty$	0

#### TRIGONOMETRICAL IDENTITIES

$$\triangleright \sin^2 \theta + \cos^2 \theta = 1$$

$$\triangleright \sin^2 \theta = 1 - \cos^2 \theta$$

$$\triangleright \cos^2 \theta = 1 - \sin^2 \theta$$

$$\triangleright 1 + \tan^2 \theta = \sec^2 \theta$$

$$\triangleright \sec^2 \theta - \tan^2 \theta = 1$$

$$\triangleright 1 + \cot^2 \theta = \operatorname{cosec}^2 \theta$$

$$\triangleright \tan \theta = \frac{\sin \theta}{\cos \theta}$$

$$\triangleright \cot \theta = \frac{\cos \theta}{\sin \theta}$$

$$\triangleright \sin \theta = \frac{1}{\operatorname{cosec} \theta}$$

$$\triangleright \cos \theta = \frac{1}{\sec \theta}$$

$$\triangleright \tan \theta = \frac{1}{\cot \theta}$$

#### COMPOUND ANGLES A + B AND A - B

$$\triangleright \sin(A + B) = \sin A \cos B + \cos A \sin B$$

$$\triangleright \sin(A - B) = \sin A \cos B - \cos A \sin B$$

$$\triangleright \cos(A + B) = \cos A \cos B - \sin A \sin B$$

$$\triangleright \cos(A - B) = \cos A \cos B + \sin A \sin B$$

$$\triangleright \tan(A + B) = \frac{\tan A + \tan B}{1 - \tan A \cdot \tan B}$$

$$\triangleright \tan(A - B) = \frac{\tan A - \tan B}{1 + \tan A \cdot \tan B}$$

*Shah*  
25/4/22



### TRIGONOMETRIC RATIOS INVOLVING 2A

➤  $\sin 2A = 2\sin A \cos A$

➤  $\sin 2A = \frac{2 \tan A}{1 + \tan^2 A}$

➤  $\cos 2A = \cos^2 A - \sin^2 A$

➤  $\cos 2A = 1 - 2\sin^2 A$

➤  $\cos 2A = 2\cos^2 A - 1$

➤  $\cos 2A = \frac{1 - \tan^2 A}{1 + \tan^2 A}$

➤  $\tan 2A = \frac{2 \tan A}{1 - \tan^2 A}$

### TRIGONOMETRIC RATIOS

➤  $\cos 3A = 4\cos^3 A - 3\cos A$

➤  $\sin 3A = 3\sin A - 4\sin^3 A$

➤  $\tan 3A = \frac{3 \tan A - \tan^3 A}{1 - 3 \tan^2 A}$

### TRANSFORMATION OF A PRODUCT INTO A SUM (OR) DIFFERENCES :

➤  $\sin(A+B) + \sin(A-B) = 2\sin A \cos B$

➤  $\sin(A+B) - \sin(A-B) = 2\cos A \sin B$

➤  $\cos(A+B) + \cos(A-B) = 2\cos A \cos B$

➤  $\cos(A+B) - \cos(A-B) = -2\sin A \sin B$

➤  $\sin C + \sin D = 2\sin \frac{C+D}{2} \cdot \cos \frac{C-D}{2}$

➤  $\sin C - \sin D = 2\cos \frac{C+D}{2} \cdot \sin \frac{C-D}{2}$

➤  $\cos C + \cos D = 2\cos \frac{C+D}{2} \cdot \cos \frac{C-D}{2}$

➤  $\cos D - \cos C = 2\sin \frac{C+D}{2} \cdot \sin \frac{C-D}{2}$

### SINE FORMULA

In any triangle ABC,  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R$ , where 'R' is the radius of circum circle of triangle ABC.

### NAPIER'S FORMULAE :

In any triangle ABC

➤  $\tan \frac{A-B}{2} = \frac{a-b}{a+b} \cot \frac{C}{2}$

➤  $\tan \frac{B-C}{2} = \frac{b-c}{b+c} \cot \frac{A}{2}$

➤  $\tan \frac{C-A}{2} = \frac{c-a}{c+a} \cot \frac{B}{2}$

### COSINE FORMULAE

In any triangle ABC

➤  $a^2 = b^2 + c^2 - 2bc \cos A$

➤  $b^2 = c^2 + a^2 - 2ca \cos B$

$$\triangleright c^2 = a^2 + b^2 - 2ab \cos C$$



### PROJECTION FORMULAE :

In any triangle ABC

$$\triangleright a = b \cos C + c \cos B$$

$$\triangleright b = c \cos A + a \cos C$$

$$\triangleright c = a \cos B + b \cos A$$

### AREA FORMULAE :

In any triangle ABC

$$\triangleright \Delta = \frac{1}{2} ab \sin C$$

$$\triangleright \Delta = \frac{1}{2} bc \sin A$$

$$\triangleright \Delta = \frac{1}{2} ca \sin B$$

$$\triangleright \Delta = \frac{abc}{4R}$$

$$\triangleright \Delta = 2R^2 \sin A \cdot \sin B \cdot \sin C$$

$$\triangleright \Delta = \sqrt{s(s-a)(s-b)(s-c)}$$

### INVERSE TRIGONOMETRIC FUNCTIONS (PROPERTIES)

$$\sin^{-1}(\sin x) = x$$

$$\cos^{-1}(\cos x) = x$$

$$\tan^{-1}(\tan x) = x$$

$$\cot^{-1}(\cot x) = x$$

$$\sec^{-1}(\sec x) = x$$

$$\operatorname{cosec}^{-1}(\operatorname{cosec} x) = x$$

$$\sin^{-1}\left(\frac{1}{x}\right) = \operatorname{cosec}^{-1} x$$

$$\cos^{-1}\left(\frac{1}{x}\right) = \sec^{-1} x$$

$$\tan^{-1}\left(\frac{1}{x}\right) = \cot^{-1} x$$

$$\operatorname{cosec}^{-1}\left(\frac{1}{x}\right) = \sin^{-1} x$$

$$\sec^{-1}\left(\frac{1}{x}\right) = \cos^{-1} x$$

$$\cot^{-1}\left(\frac{1}{x}\right) = \tan^{-1} x$$

$$\sin^{-1}(-x) = -\sin^{-1} x$$

$$\cos^{-1}(-x) = \pi - \cos^{-1} x$$

$$\tan^{-1}(-x) = -\tan^{-1} x$$

$$\operatorname{cosec}^{-1}(-x) = -\operatorname{cosec}^{-1} x$$

$$\sec^{-1}(-x) = \pi - \sec^{-1} x$$

$$\cot^{-1}(-x) = -\cot^{-1} x$$

$$\sin^{-1} x + \cos^{-1} x = \frac{\pi}{2}$$

$$\tan^{-1} x + \cot^{-1} x = \frac{\pi}{2}$$

$$\sec^{-1} x + \operatorname{cosec}^{-1} x = \frac{\pi}{2}$$

*Shal*  
25/4/22



If  $xy < 1$  then

$$\tan^{-1} x + \tan^{-1} y = \tan^{-1} \left( \frac{x+y}{1-xy} \right)$$

$$\tan^{-1} x - \tan^{-1} y = \tan^{-1} \left( \frac{x-y}{1+xy} \right)$$

$$\sin^{-1} x + \sin^{-1} y = \sin^{-1} \left[ x\sqrt{1-y^2} + y\sqrt{1-x^2} \right]$$

$$\cos^{-1} x + \cos^{-1} y = \cos^{-1} \left[ xy - \sqrt{1-x^2} \cdot \sqrt{1-y^2} \right]$$

$$\sin^{-1} x - \sin^{-1} y = \sin^{-1} \left[ x\sqrt{1-y^2} - y\sqrt{1-x^2} \right]$$

$$\cos^{-1} x - \cos^{-1} y = \cos^{-1} \left[ xy + \sqrt{1-x^2} \cdot \sqrt{1-y^2} \right]$$

### MATHEMATICS + DIFFERENTIAL CALCULUS - FORMULAE

$$\triangleright \frac{d}{dx}(k); k \text{ is constant} = 0$$

$$\triangleright \frac{d}{dx}(k \cdot f(x)) = k \cdot \frac{d}{dx}(f(x))$$

$$\triangleright \frac{d}{dx}(x^n) = nx^{n-1} (n \in \mathbb{R})$$

$$\triangleright \frac{d}{dx}(\log_e x) = \frac{1}{x}$$

$$\triangleright \frac{d}{dx}(\log_a x) = \frac{\log_a e}{x}$$

$$\triangleright \frac{d}{dx}(\sin x) = \cos x$$

$$\triangleright \frac{d}{dx}(\cos x) = -\sin x$$

$$\triangleright \frac{d}{dx}(\tan x) = \sec^2 x$$

$$\triangleright \frac{d}{dx}(\sec x) = \sec x \tan x$$

$$\triangleright \frac{d}{dx}(\operatorname{cosec} x) = -\operatorname{cosec}^2 x$$

$$\triangleright \frac{d}{dx}(\sin ax) = a \cos ax$$

$$\triangleright \frac{d}{dx}(\cos ax) = -a \sin ax$$

$$\triangleright \frac{d}{dx}(e^x) = e^x$$

$$\triangleright \frac{d}{dx}(e^{ax}) = ae^{ax}$$

$$\triangleright \frac{d}{dx}(\sin^{-1} x) = \frac{1}{\sqrt{1-x^2}}$$

$$\triangleright \frac{d}{dx}(\cos^{-1} x) = \frac{-1}{\sqrt{1-x^2}}$$

$$\triangleright \frac{d}{dx}(\tan^{-1} x) = \frac{1}{1+x^2}$$



$$\triangleright \frac{d}{dx}(\cot^{-1} x) = \frac{-1}{1+x^2}$$

$$\triangleright \frac{d}{dx}(\sec^{-1} x) = \frac{1}{x\sqrt{x^2-1}}$$

$$\triangleright \frac{d}{dx}(\operatorname{cosec}^{-1} x) = \frac{-1}{x\sqrt{x^2-1}}$$

$$\triangleright \frac{d}{dx}(a^x) = a^x \cdot \log a$$

$$\triangleright \frac{d}{dx}(\sqrt{x}) = \frac{1}{2\sqrt{x}}$$

$$\triangleright \frac{d}{dx}(\sin^n x) = n \sin^{n-1} x \cdot \cos x$$

$$\triangleright \frac{d}{dx}(\cos^n x) = -n \cos^{n-1} x \cdot \sin x$$

#### SUM OR DIFFERENCE RULE

$$\triangleright \frac{d}{dx}(u+v) = \frac{du}{dx} + \frac{dv}{dx}$$

$$\triangleright \frac{d}{dx}(u-v) = \frac{du}{dx} - \frac{dv}{dx}$$

$$\triangleright \frac{d}{dx}(u_1 + u_2 + u_3 + \dots + u_n) = \frac{du_1}{dx} + \frac{du_2}{dx} + \frac{du_3}{dx} + \dots + \frac{du_n}{dx}$$

#### PRODUCT RULE

$$\triangleright \frac{d}{dx}(uv) = u \cdot \frac{dv}{dx} + v \cdot \frac{du}{dx}$$

$$\triangleright \frac{d}{dx}(uvw) = uv \cdot \frac{dw}{dx} + vw \cdot \frac{du}{dx} + wu \cdot \frac{dv}{dx}$$

#### QUOTIENT RULE

$$\triangleright \frac{d}{dx}\left(\frac{u}{v}\right) = \frac{v \cdot \frac{du}{dx} - u \cdot \frac{dv}{dx}}{v^2}$$

#### CHAIN RULE : (HINT)

- $\triangleright$  Step 1 : Differentiate the power if function contains power.
- $\triangleright$  Step 2 : Differentiate the function
- $\triangleright$  Step 3 : Differentiate the bracket if function contains bracket

*Done*  
25/4/22



Eg :

$$y = \sin^3(2x^2 + 2)$$

$$\frac{dy}{dx} = 3\sin^2(2x^2 + 2) \cdot \cos(2x^2 + 2) \cdot 4x$$

          ↑                  ↑                  ↑  
          Step 1              Step 2              Step 3

### INTEGRAL CALCULUS – INTRODUCTION

- Basic familiar pairs of inverse operations are  $(+, -)$ ,  $(\times, \div)$ ,  $((), \sqrt{\quad})$ . Similarly differentiation and Integrations are also inverse operations.
- The symbol  $\int$  is the sign of integration.  $\int$  is elongated S, which is the first letter of the word sum.
- $\int f(x) dx = F(x) + C$   
Here  $F(x)$  is called anti-derivative or integral of a function  $f(x)$ .
- The function  $f(x)$  is called **Integrand**
- The variable  $x$  in  $dx$  is called variable of integration or **integrator**
- $C$  is called **arbitrary constant** (constant of integration)
- The process of finding the integral is called Integration.

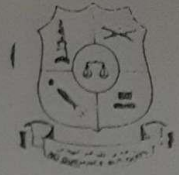
### TWO VISIONS OF INTEGRATION :

- Mathematician Leibnitz approached integral as the **anti-derivative of a differentiable function**.
- Mathematicians Archimedes, Eudoxus and others developed it as a numerical value equal to the **area under the curve** of a function for some interval.

### VIEW OF CALCULUS IN GEOMETRY

- The problem of finding **SLOPE OF THE TANGENT LINE TO THE CURVE** is studied by the limiting process known as **DIFFERENTIATION**.





- $\int f'(x)[f(x)]^n dx = \frac{[f(x)]^{n+1}}{n+1} + c$  Where  $n \neq -1$
- $\int \cot x dx = \log \sin x + c$
- $\int \operatorname{cosec} x dx = \log \tan \frac{x}{2} + c$
- $\int \frac{dx}{a^2 - x^2} = \frac{1}{2a} \log \left( \frac{a+x}{a-x} \right) + c$
- $\int \frac{dx}{x^2 - a^2} = \frac{1}{2a} \log \left( \frac{x-a}{x+a} \right) + c$
- $\int \frac{dx}{x^2 + a^2} = \frac{1}{a} \tan^{-1} \left( \frac{x}{a} \right) + c$
- $\int \frac{dx}{\sqrt{a^2 - x^2}} = \sin^{-1} \left( \frac{x}{a} \right) + c$
- $\int \frac{dx}{\sqrt{x^2 - a^2}} = \log \left( x + \sqrt{x^2 - a^2} \right) + c$
- $\int \frac{dx}{\sqrt{x^2 + a^2}} = \log \left( x + \sqrt{x^2 + a^2} \right) + c$
- $\int e^{ax} \sin bx dx = \frac{e^{ax}}{a^2 + b^2} (a \sin bx - b \cos bx) + c$
- $\int e^{ax} \cos bx dx = \frac{e^{ax}}{a^2 + b^2} (a \cos bx + b \sin bx) + c$
- $\int \sqrt{a^2 - x^2} dx = \frac{x}{2} \sqrt{a^2 - x^2} + \frac{a^2}{2} \sin^{-1} \frac{x}{a} + c$
- $\int \sqrt{x^2 - a^2} dx = \frac{x}{2} \sqrt{x^2 - a^2} - \frac{a^2}{2} \log \left[ x + \sqrt{x^2 - a^2} \right] + c$
- $\int \sqrt{x^2 + a^2} dx = \frac{x}{2} \sqrt{x^2 + a^2} + \frac{a^2}{2} \log \left[ x + \sqrt{x^2 + a^2} \right] + c$

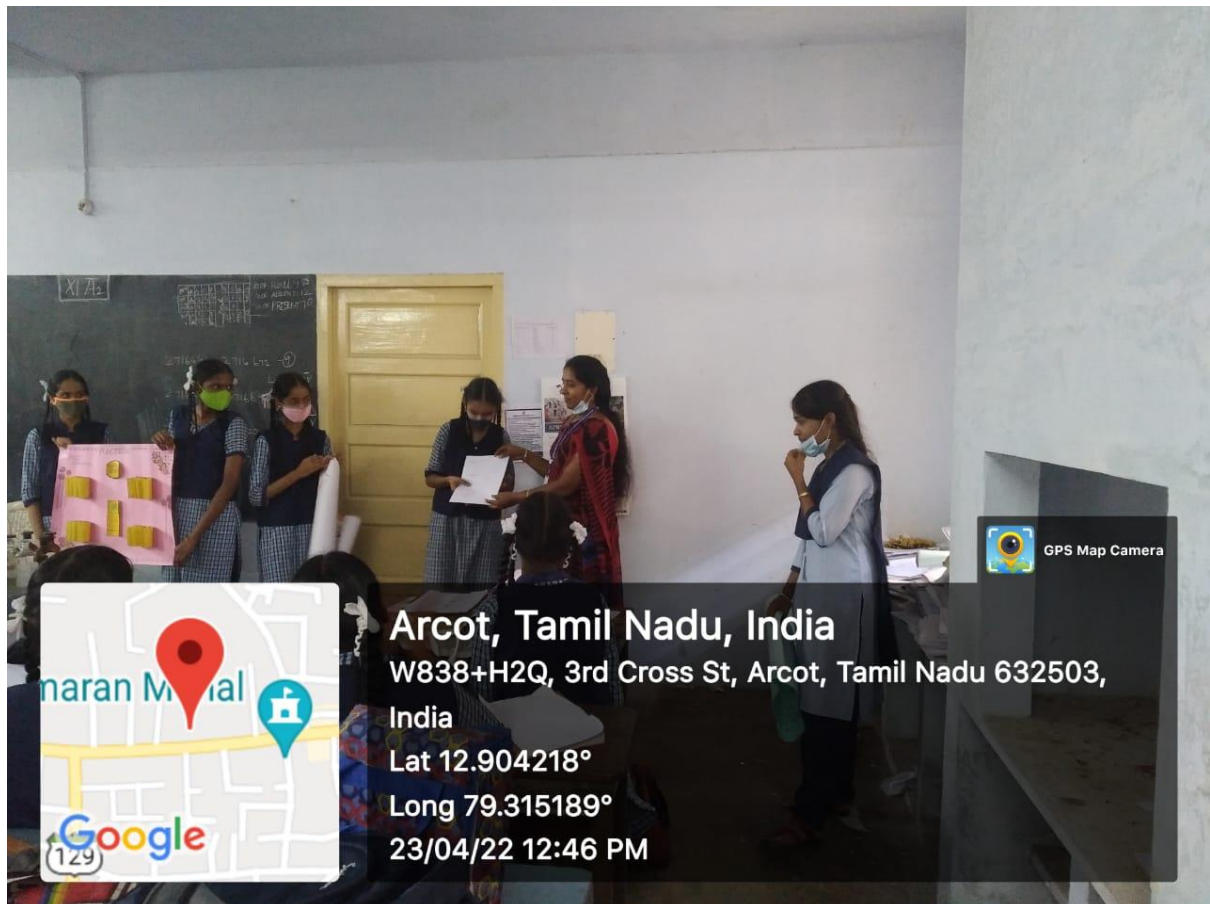
### Bernoulli's Formula

$$\int u dv = uv - u'v_1 + u''v_2 - u'''v_3 + \dots$$

### Integration by parts

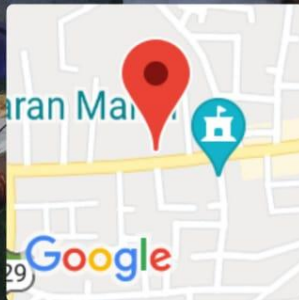
$$\int u dv = uv - \int v du$$

Our staff members prepared this basic formula book for the students to understand easily and we distributed the formula book to the school students those who are very interesting, creative and want this to get more knowledge in the field of mathematics.

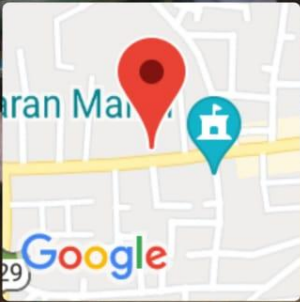




**Arcot, Tamil Nadu, India**  
W838+P65, SH 129, Arcot, Tamil Nadu 632503, India  
Lat 12.904175°  
Long 79.315715°  
23/04/22 12:35 PM



**Arcot, Tamil Nadu, India**  
W838+P65, SH 129, Arcot, Tamil Nadu 632503, India  
Lat 12.904173°  
Long 79.315715°  
23/04/22 12:33 PM



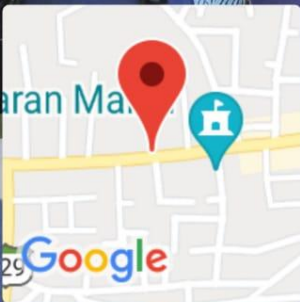
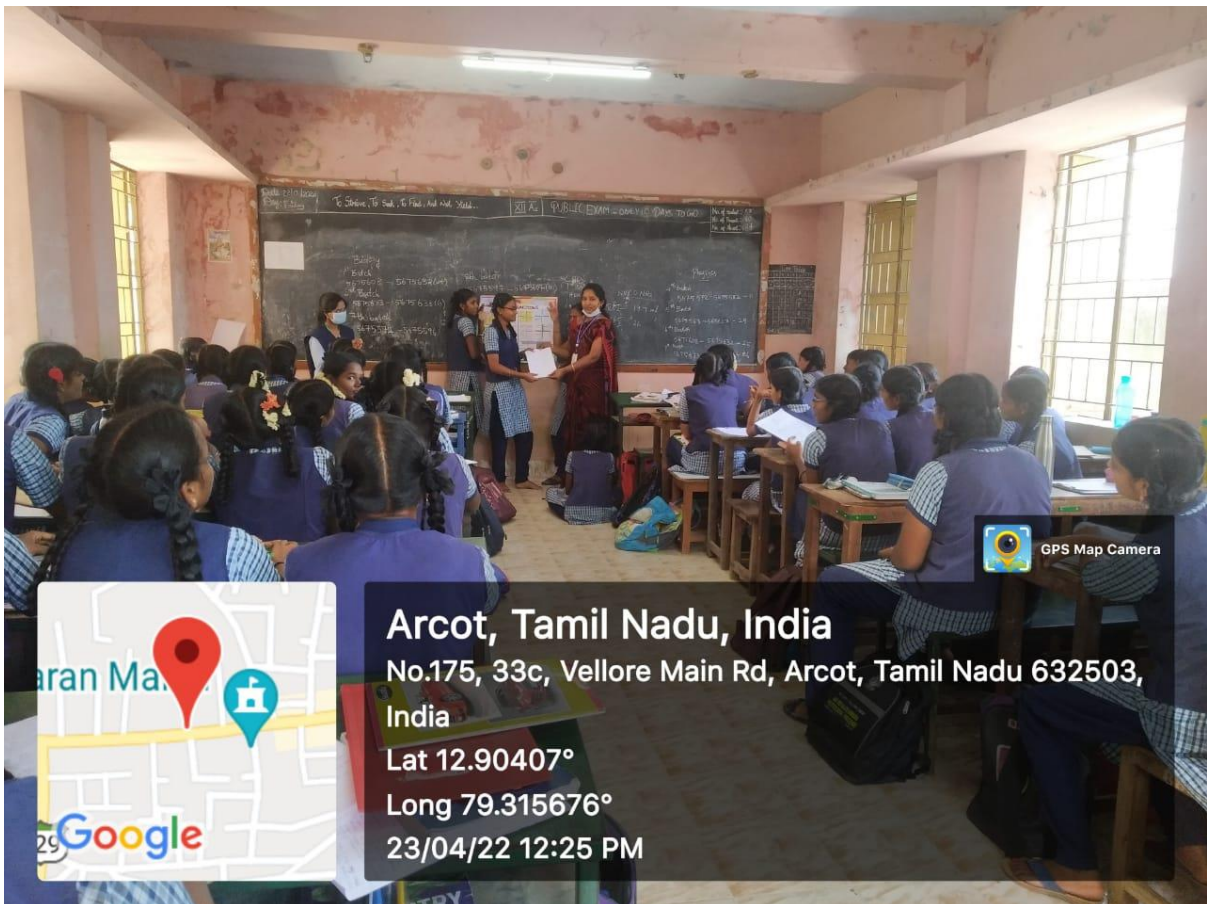
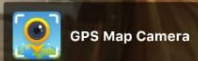
Arcot, Tamil Nadu, India

W838+P65, SH 129, Arcot, Tamil Nadu 632503, India

Lat 12.904175°

Long 79.315715°

23/04/22 12:35 PM



Arcot, Tamil Nadu, India

No.175, 33c, Vellore Main Rd, Arcot, Tamil Nadu 632503,

India

Lat 12.90407°

Long 79.315676°

23/04/22 12:25 PM





**M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE**  
(Affiliated to Thiruvalluvar University)  
HAKEEM NAGAR - MELVISHARAM- 632 509



**DEPARTMENT OF MATHEMATICS**  
**OUTREACH PROGRAM 2023-2024**



**M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE**  
(Affiliated to Thiruvalluvar University)  
Hakeem Nagar, Melvisharam-632509, Walaja Taluk, Arcot Block, Ranipet Dist.  
Email : mmeswc@yahoo.in Website: www.mmeswc.edu.in

Phone : 04172 - 266167  
04172 - 266463  
Cell : 89035 - 66701



*Dr. Freda Gnanaselvam*  
M.B.A., M.M.M., M.Phil., Ph.D.,  
Principal

1.1 SEP 2023

To

The Headmistress,  
Islamiah Girls Higher Secondary School,  
Melvisharam- 632509

Respected Madam,


Sub: Outreach activity - permission to visit your institution – regarding

Greetings!

We are willing to visit your institution as part of outreach activity along with students and staff members. Kindly give us your favorable date and time for visit to the institution.

Thanking you,

Yours Sincerely

  
11/9/23  
Principal

Dr. Freda Gnanaselvam, Ph.D.,  
Principal  
M.M.E.S. Women's Arts & Science College  
Melvisharam - 632 509



## M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE

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*Dr. Freda Gnanaselvam*

M.B.A., M.M.M., M.Phil., Ph.D.,

Principal

11 SEP 2023

To

The Headmistress,  
Islamiah Girls Higher Secondary School,  
Melvisharam - 632509

Respected Madam,

Sub: Outreach activity - permission to visit your institution – regarding

Greetings!

We are willing to visit your institution as part of outreach activity along with students and staff members. Kindly give us your favorable date and time for visit to the institution.

Thanking you,

Yours Sincerely

*Dr.*  
11/9/23  
Principal

Dr. Freda Gnanaselvam, Ph.D.,  
Principal  
M.M.E.S. Women's Arts & Science College  
Melvisharam - 632 509

I gave Permission to conduct the outreach  
Program on 13.9.2023 from 2.00 P.M to 4.00 P.M.

*[Signature]*  
11/09/23  
HEAD MISTRESS  
Islamiah Girls Hr. Sec. School  
Melvisharam - 632 509



**M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE**

(Affiliated to Thiruvalluvar University)

HAKEEM NAGAR - MELVISHARAM- 632 509

Walaja Taluk, Arcot Block Phone:04172 266167, 266463

Email:mmeswc@yahoo.in website:www.mmeswc.edu.in



12.09.2023

To

The Principal,  
M.M.E.S Women's Arts and Science College,  
Melvisharam-632509.

Respected Madam,

Sub: Requesting to visit the school-reg

Islamiah girls higher secondary school, Melvisharam, gave the permission to visit their school on 13th September, 2023, from 2:00 p.m. to 3.00 p.m. So we request you to give the permission to visit the school. 11 M.Sc. students and 15 III B.Sc. students will be accompanied by Miss B. Aruna, Mrs. D. Radha, and Mrs. R. Agalya. We are going to create an awareness about an importance, applications, and benefits of mathematics in day to day life.

*J. Yogesh*  
12/9/2023  
HEAD OF THE DEPARTMENT

Head of the Department  
Department of Mathematics  
M.M.E.S. Women's Arts & Science College  
MELVISHARAM - 632 509.

*Dr. Freda Gnanaselvam*

PRINCIPAL  
Dr. Freda Gnanaselvam, Ph.D.,  
Principal  
M.M.E.S. Women's Arts & Science College  
Melvisharam - 632 509


# CERTIFICATE OF APPRECIATION

The Headmistress,  
Islamiah Girls Higher Secondary School,  
Melvisharam -632509.

Respected Madam,

I take pleasure in certifying that the Department of Mathematics of M.M.E.S. women's Arts and Science College, Melvisharam, Ranipet District 632509 has conducted the outreach program under the guidance of Mrs. R. Agalya, Mrs. D. Radha, Ms B Aruna and 26 students of M.Sc., Mathematics and B.Sc., Mathematics are participated in this program. They taught importance of mathematics, short way to memories the mathematical formulae, and some interesting mathematical games to motivate the students.

With Regards

  
13/09/23.

**HEAD MISTRESS**  
Islamiah Girls Hr. Sec. School  
Melvisharam - 632 509



Date: 13.09.2023

Place: Melvisharam





M.M.E.S. WOMEN'S ARTS AND SCIENCE COLLEGE  
(Affiliated to Thiruvalluvar University)  
HAKEEM NAGAR - MELVISHARAM- 632 509



DEPARTMENT OF MATHEMATICS  
OUTREACH PROGRAM 2023-2024

Date : 13.09.2023


Venue : ISLAMIAH GIRLS HIGHER SECONDARY SCHOOL,  
MELVISHARAM

In order to visit the Islamiah Girls Higher Secondary School in Melvisharam on 13 September, 2023, 11 Pg students and 15 III UG students participated in an outreach program accompanied by Miss B. Aruna, Mrs. D. Radha, and Mrs. R. Agalya from the Department of Mathematics. Students and staff conducted a variety of mathematics games, riddles and create an awareness about the benefits and importance of mathematics. For the benefit of the 85 school students, faculty and our students held a discussion about how mathematics plays a significant part in daily life and how it connects to all courses such as physics, chemistry, biology, history, and diverse fields such as medicine, archaeology, etc.



Dr. Freda Gnanaselvam, Ph.D.,  
Principal  
M.M.E.S. Women's Arts & Science College  
Melvisharam - 632 509



  
**Dr. Freda Gnanaselvam, Ph.D.,**  
Principal  
M.M.E.S. Women's Arts & Science College  
Melvisharam - 632 509

## PARTICIPANTS LIST:

S.NO	NAME	CLASS
1	CHANDHANASHREE. T	II M.Sc., MATHEMATICS
2	KAAVIYA. K	II M.Sc., MATHEMATICS
3	KAVIYA.V	II M.Sc., MATHEMATICS
4	RAJESHWARI. B	II M.Sc., MATHEMATICS
5	SABRIN. N	II M.Sc., MATHEMATICS
6	SHAFIA AMBER. M. A	II M.Sc., MATHEMATICS
7	SOWMIYA. M	II M.Sc., MATHEMATICS
8	SRIVARSHANI. R	II M.Sc., MATHEMATICS
9	UZMA NOUREEN. A	II M.Sc., MATHEMATICS
10	DHURGA. T	I M.Sc., MATHEMATICS
11	AISHA SIDDDHIQA SAMREEN. K. H	I M.Sc., MATHEMATICS
12	AYISHA SIDDIGA. M. J.	III B.Sc., MATHEMATICS
13	DEEPA. R	III B.Sc., MATHEMATICS
14	FARHEEN. Y	III B.Sc., MATHEMATICS
15	JAYASHREE. E	III B.Sc., MATHEMATICS
16	KAVIYA PRIYA. R	III B.Sc., MATHEMATICS
17	KAVIYA. S	III B.Sc., MATHEMATICS
18	MADHUMITHA. M	III B.Sc., MATHEMATICS
19	MEENA. M	III B.Sc., MATHEMATICS
20	MOHANAPRIYA. K	III B.Sc., MATHEMATICS
21	NANDHINI. K	III B.Sc., MATHEMATICS
22	PAPITHA. P	III B.Sc., MATHEMATICS
23	PRAMILADEVI. M	III B.Sc., MATHEMATICS
24	PREETHIKA. M. S	III B.Sc., MATHEMATICS
25	SASIKALA. B	III B.Sc., MATHEMATICS
26	VJAYALAKSHMI. A	III B.Sc., MATHEMATICS

  
**Dr. Freda Gnanaselvam, Ph.D.,**  
 Principal  
 M.M.E.S. Women's Arts & Science College  
 Meivisharam - 632 509