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1 \documentclass[11pt]{beamer}
2 \usepackage[utf8]{inputenc}
3 \usepackage{graphicx}
4 %\author{saraswatsheetal1408 }
5 \date{}
6 \usetheme{Copenhagen}
7 \usepackage{xcolor}
8 \usepackage{shadowtext}
9 \begin{document}
10 {\usebackgroundtemplate{\includegraphics[width=\paperwidth,height=\paperheight]{background_7360117
11 6_468_3 (1) (2).jpg}}
12 \begin{frame}{}
13 \begin{center}
14 \huge{\shadowtext{\textcolor{red} {Mata Sundri College for Women}}}\
15 \huge{\shadowtext{\textcolor{red} {Delhi University}}}\
16 \end{center}
17 \begin{center}
18 \Large{\textcolor{blue}{\textcolor{blue}{Name = Sheetal Saraswat}}}\ {College Roll no.= MAT \backslash 20
19 \backslash 124}\ {University Roll no. = 20044563048 }}
20 \end{center}
21 \end{frame}}
22 \maketitle
23 \begin{frame}{Pg 69 of Donald Book}
24 \begin{block}{}
25 1. Let  $x = (x_1 + \dots + x_n)$ , where the  $x_i$  are nonnegative real numbers. Set  $\text{\space{0.2}}$ 
26  $\text{cm}$ 
27  $M_r(x) = \left( \frac{x_1^r + x_2^r + \dots + x_n^r}{n} \right)^{1/r}$ ,  $r \in \mathbb{R} \setminus \{0\}$ 
28 and  $M_0(x) = (x_1 x_2 \dots x_n)^{1/n}$ 
29 We call  $M_r(x)$  the  $r$ th power mean of  $x$ 
30 Claim :
31  $\lim_{r \rightarrow 0} M_r(x) = M_0(x)$ 
32 \end{block}
33 \end{frame}
34 \begin{exampleblock}{}
35 Define  $V_n = \begin{bmatrix} x_1 & x_2 & \dots & x_n \\ x_1^2 & x_2^2 & \dots & x_n^2 \\ \vdots & \vdots & \ddots & \vdots \\ x_1^{n-1} & x_2^{n-1} & \dots & x_n^{n-1} \end{bmatrix}$ 
36 We call  $V_n$  the Vandermonde matrix of order  $n$ 
37 Claim :
38  $\det V_n = \prod_{1 \leq i < j \leq n} (x_j - x_i)$ 
39 \end{exampleblock}
40 \end{frame}
41 \begin{frame}{Question 4}
42 \begin{alertblock}{Make the following equations}
43  $3^3 + 4^3 + 5^3 = 6^3$ 
44  $\sqrt{100} = 10$ 
45  $(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$ 
46  $\sum_{k=1}^n k = \frac{n(n+1)}{2}$ 
47  $\frac{\pi}{4} = \frac{1}{1} - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} - \frac{1}{11} + \dots$ 
48 \end{alertblock}
49 \end{frame}
50 \begin{frame}{Remaining parts of Question 4}
51 \begin{block}{}
52 \begin{itemize}
53 \item  $\cos(\theta) = \sin(90^\circ - \theta)$ 
54 \item  $e^{i\theta} = \cos(\theta) + i \sin(\theta)$ 
55 \item  $\lim_{\theta \rightarrow 0} \frac{\sin(\theta)}{\theta} = 1$ 
56 \item  $\lim_{x \rightarrow \infty} \frac{\pi(x)}{x / \log x} = 1$ 
57 \item  $\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}$ 
58 \end{itemize}
59 \end{block}
60 \end{frame}
61 \begin{frame}{Question 5}

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68+ \begin{frame}{Question 5}
69+ \begin{block}{Typeset the following sentences}
70
71 Positive numbers  $a, b$  and  $c$  are the side lengths of a triangle if and only if  $a+b > c$ ,  $b+c > a$ , and  $c+a > b$ .
72 The area of a triangle with side lengths  $a, b, c$  is given by Heron's formula:
73  $A = \sqrt{s(s-a)(s-b)(s-c)}$ ,
74 Where  $s$  is the semiperimeter  $(a+b+c)/2$ .
75 The volume of a regular tetrahedron of edge length 1 is  $\sqrt{2}/12$ .
76 The quadratic equation  $ax^2 + bx + c = 0$  has roots.
77
78 \end{block}
79 \end{frame}
80
81+ \begin{frame}{Remaining parts of Question 5}
82+ \begin{exampleblock}{}
83  $r_1, r_2 = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$ 
84 The derivative of a function  $f$ , denoted  $f'$ , is defined by
85  $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ 
86 A real-valued function  $f$  is convex on an interval  $I$  if
87  $f(\lambda x + (1-\lambda)y) \leq \lambda f(x) + (1-\lambda)f(y)$ ,
88 for all  $x, y \in I$  and  $0 \leq \lambda \leq 1$ .
89 \end{exampleblock}
90 \end{frame}
91+ \begin{frame}{Remaining parts of Question 5}
92+ \begin{block}
93
94 The general solution to the differential equation
95  $y'' - 3y' + 2y = 0$ 
96 is
97  $y = C_1 e^x + C_2 e^{2x}$ .
98 The Fermat number  $F_n$  is defined as
99  $F_n = 2^{2^n} + 1$ ,  $n \geq 0$ 
100 \end{block}
101 \end{frame}
102+ \begin{frame}{Question 6}
103+ \begin{alertblock}{Make the following equations. Notice the large delimiters.}
104  $\left[ \frac{d}{dx} \left( \frac{x}{x+1} \right) = \frac{1}{(x+1)^2} \right]$ 
105  $\left[ \lim_{n \rightarrow \infty} \left( 1 + \frac{1}{n} \right)^n = e \right]$ 
106  $\left[ \begin{array}{cc} a & b \\ c & d \end{array} \right]$ 
107  $\left[ \begin{array}{cc} ad - bc \end{array} \right]$ 
108  $\left[ \begin{array}{cc} R_{\theta} = \begin{array}{cc} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{array} \end{array} \right]$ 
109  $\left[ \begin{array}{cc} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{array} \right]$ 
110  $\left[ \begin{array}{cc} \sin \theta & \cos \theta \end{array} \right]$ 
111  $\left[ \begin{array}{cc} \end{array} \right]$ 
112 \end{alertblock}
113 \end{frame}
114 \end{frame}
115 \end{frame}
116+ \begin{frame}{Remaining parts of Question 6}
117+ \begin{block}{}
118  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
119  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
120  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
121  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
122  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
123  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
124  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
125  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
126  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
127  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
128  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
129  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
130  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
131  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
132  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
133  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
134  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
135  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
136  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
137  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 
138  $\left[ \begin{array}{ccc} \text{a}_1 & \text{a}_2 & \text{a}_3 \\ \text{b}_1 & \text{b}_2 & \text{b}_3 \end{array} \right]$ 

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139 \end{array}\right\}
140 $$ f(x) = \begin{cases} -x^2, & x < 0 \\ x^2, & 0 \leq x \leq 2 \\ 4, & x > 2 \end{cases} $$
141 \end{block}
142 \end{frame}
143 \begin{frame}{Question 7}
144 \begin{exampleblock}{Make the following multi-line equations.}
145 \quad \{1+2 = 3\}
146 \quad \{4+5+6 = 7+8\}
147 \quad \{9+10+11+12 = 13+14+15\}
148 \quad \{16+17+18+19+20 = 21+22+23+24\}
149 \quad \{25+26+27+28+29+30 = 31+32+33+34+35\}
150 \end{exampleblock}
151 \end{frame}
152 \begin{frame}{Remaning parts of Question 7}
153 \begin{alertblock}{}
154 \begin{eqnarray*}
155 (a+b)^2 & = & (a+b)(a+b) \\
156 & = & (a+b) a + (a+b) b \\
157 & = & a(a+b) + b(a+b) \\
158 & = & a^2 + ab + ba + b^2 \\
159 & = & a^2 + ab + ab + b^2 \\
160 & = & a^2 + 2ab + b^2
161 \end{eqnarray*}
162 \end{alertblock}
163 \end{frame}
164 \begin{frame}{Remaining parts of Question 7}
165 \begin{block}{}
166 \begin{eqnarray*}
167 \tan(\alpha + \beta + \gamma) & = & \frac{\tan(\alpha + \beta) + \tan \gamma}{1 - \tan(\alpha + \beta) \tan \gamma} \\
168 & = & \frac{\frac{\tan \alpha + \tan \beta}{1 - \tan \alpha \tan \beta} + \tan \gamma}{1 - \frac{\tan \alpha + \tan \beta}{1 - \tan \alpha \tan \beta} \tan \gamma} \\
169 & = & \frac{\tan \alpha + \tan \beta + (1 - \tan \alpha \tan \beta) \tan \gamma}{1 - \tan \alpha \tan \beta - (\tan \alpha + \tan \beta) \tan \gamma} \\
170 & = & \frac{\tan \alpha + \tan \beta + \tan \gamma - \tan \alpha \tan \beta \tan \gamma}{1 - \tan \alpha \tan \beta - \tan \alpha \tan \gamma - \tan \beta \tan \gamma}
171 \end{eqnarray*}
172 \end{block}
173 \end{frame}
174 \begin{frame}{Remaining parts of Question 7}
175 \begin{exampleblock}{}
176 \begin{eqnarray*}
177 \prod_p (1 - \frac{1}{p^2}) & = & \prod_p \frac{1}{1 + \frac{1}{p^2} + \frac{1}{p^4} + \dots} \\
178 & = & \left( \prod_p \left( 1 + \frac{1}{p^2} + \frac{1}{p^4} + \dots \right) \right)^{-1} \\
179 & = & \left( 1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \dots \right)^{-1} \\
180 & = & \frac{6}{\pi^2}
181 \end{eqnarray*}
182 \end{exampleblock}
183 \end{frame}
184 \begin{frame}{}
185 \includegraphics[width=\paperwidth,height=\paperheight]{thank-you-lettering-with-curls_1262-6964-1.jpg}
186 \end{frame}
187 \end{document}
188 \section{Introduction}
189
190
191

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