```latex
\documentclass{beamer}
\usepackage[utf8]{inputenc}
\date{}
%\maketitle
\usetheme{Warsaw}
\begin{document}
\begin{frame}
\begin{block}
{MATA SUNDRI COLLEGE FOR WOMEN}
\centering
Name- HRITHIKA\\
 College roll no. -MAT/20/117\\
 University roll no. - 20044563042
\end{block}
    \end{frame}
\begin{frame}{Example 9.6}
   \begin{enumerate}
\item Let $\mathbf{x}=(x_1,\ldots,x_n)$,
where the $x_i$ are nonnegative real numbers.
Set
\[
M_r(\mathbf{x}) = \left(\frac{x_1^r+x_2^r
+\cdots+x_n^r}{n}\right)^{1/r},
\; \; r \in \mathbf{R} \setminus \{0\},
\]
and
\[
M_0(\mathbf{x})=\left( x_1 x_2 \ldots x_n \right)^{1/n}.
\]
We call $M_r(\mathbf{x})$ the \emph{$r$th power mean}
of $\mathbf{x}$.
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\[
\lim_{r \rightarrow 0} M_r(\mathbf{x}) =
M_0(\mathbf{x}).
\]
\end{enumerate}
\end{frame}
\begin{frame}{How to use graphics}
  \begin{enumerate}
\item Define
\[
V_n=
\left[
\begin{array}{ccccc}
1 & 1 & 1 & \ldots & 1\\
x_1 & x_2 & x_3 & \ldots & x_n\\
x_1^2 & x_2^2 & x_3^2 & \ldots & x_n^2\\
\vdots & \vdots & \vdots & \ddots & \vdots\\
x_1^{n-1} & x_2^{n-1} & x_3^{n-1} & \ldots & x_n^{n-1}
\end{array}
\right].
\]
We call $V_n$ the \emph{Vandermonde matrix} of order $n$.
Claim:
\[
\det V_n = \prod_{1 \leq i < j \leq n}(x_j-x_i).
\]
\end{enumerate}
\end{frame}
\begin{frame}{ Question 4}
\begin{eqnarray*}
      {3^3+4^3+5^3=6^3}\\
        {\sqrt{100}=10}\\
       {(a+b)^3=a^3+3a^2b+3ab^2+b^3} \\
   \sum_{k=1}^n k=\frac{n(n+1)}{2} \\
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    {(a+b)^3=a^3+3a^2b+3ab^2+b^3} \\
   \sum_{k=1}^n k=\frac{n(n+1)}{2} \\
   \frac{\pi}{4}=\frac{1}{1}-\frac{1}{3}+\frac{1}{5}-\frac{1}{7}+\frac{1}{9}-\frac{1}{11}+\cdots
    \end{eqnarray*}
\end{frame}

\begin{frame}
\begin{eqnarray*}
   \lim_{\theta\rightarrow 0}\frac{Sin\theta}{\theta}=1\\
   \lim_{x\rightarrow\infty}\frac{pi(x)}{x/log(x)}=1\\
   \int_{-\infty}^\infty e^{-x^2}dx=\sqrt{pi}
   \end{eqnarray*}
\end{frame}
\begin{frame}  {Question 5}
\begin{enumerate}
   \item Positive numbers a,b,c are the side lengths of a triangle if and only if $ a+b>c ,b+c >a , c+a>b$\\
   \item The area of a triangle with side lenghts a,b,c is given by \emph{Heron's formula}:
   \[\mathbf{A}=\sqrt{s(s-a)(s-b)(s-c)},\]
   where\emph{s} is the semiperimeter (a+b+c)/2.
   \item The quadratic equation $ax^2+bx+c=0$ has roots \[r_1,r_2=\frac{-b\pm\sqrt{b^2-4ac}}{2a}\].
\end{enumerate}
   \end{frame}
   \begin{frame}
   \begin{enumerate}
       \item The derivative of a function \emph{f},denoted\emph{f'},is defined by,\[f'(x)=\lim_{h\rightarrow0}\frac{f(x+h)-f(x)}{h}\]
       \item A real-valued function \emph{f} is \emph{convex} on an interval \emph{I} if \[f(\lambda x+(1-\lambda)y)\leq\lambda f(x)+(1-\lambda)f(y)\],\[for  all  x,y \in
        I     and    0 \leq \lambda \leq1\].
       \item The general solution to the differential equation $$y"-3y'+2y=0$$ is $$ y=C_1e^x +C_2e^{2x}.$$
       \item The Fermat number$ F_n$ is defined as  $$ F_n=2^{2^n}$$, n>0.
   \end{enumerate}
   \end{frame}

   \begin{frame}{Question 6}
   \begin{itemize}
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        \item The Fermat number$ F_n$ is defined as  $$ F_n=2^{2^n}$$, n>0.
    \end{enumerate}
    \end{frame}

    \begin{frame}{Question 6}
    \begin{itemize}
        \item \[\frac{d}{dx}\left(\frac{x}{x+1}\right)=\frac{1}{(x+1)^2}\]
        \item \[\lim_{n \rightarrow
        \infty}\left(1+\frac{1}{n}\right)^n=e\]
        \item
        \[\begin{vmatrix}
        a & b\\
        c & d
        \end{vmatrix}=ad-bc\]
        \item\[R_\theta=\begin{bmatrix}\cos\theta &
        -\sin\theta\\ \sin\theta & \cos\theta
        \end{bmatrix}\]
        \item\[\begin{vmatrix}
        i & j & k\\
        a_1 & b_2 & a_3\\
        b_1 & b_2 & b_3
        \end{vmatrix}=
        \begin{vmatrix}
        a_2 & a_3\\
        b_1 & b_3
        \end{vmatrix}\textbf{i}-\begin{vmatrix}
        a_1 & b_3\\
        b_1 & b_3
        \end{vmatrix}\textbf{j}+\begin{vmatrix}
        a_1 & a_2\\
        b_1 & b_2
        \end{vmatrix}\textbf{k}\]
       \end{itemize}
  \end{frame}
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\end{frame}

\begin{frame}
\begin{itemize}
    \item \[\begin{bmatrix} a_{11} & a_{12}\\a_{21} & a_{22} \end{bmatrix} \begin{bmatrix} b_{11}& b_{12}\\b_{21} & b_{22} \end{bmatrix}=\begin{bmatrix} a_{11} b_{11}+a_{12} b_{21} & a_{11}b_{12}+ a_{12}b_{22}\\ a_{21} b_{11}+ a_{22}b_{21}& a_{21}b_{12}+ a_{22} b_{22}\end{bmatrix}\]
    \item\[f(x)=\begin{cases}-x^2,& x <0\\x^2, & 0\le x \le 2\\ 4,&x >2\end{cases}\]
    \end{itemize}

\end{frame}

\begin{frame}{Question 7(MULTI LINE EQUATIONS)}
    \begin{block}{1 st part}
    {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+32+33+34+35}
        \end{block}
\end{frame}
\begin{frame}
    \begin {block}{2nd part}
    {\begin{eqnarray*}
        (a+b)^2&=&(a+b)(a+b)\\
        &=&(a+b)a+(a+b)b\\
         &=&a(a+b)+b(a+b)\\
         &=&a^2+ab+ba+b^2\\
         &=&a^2+ab+ab+b^2\\
        &=& a^2+2ab+b^2\\
    \end{eqnarray*}}
    \end{block}
\end{frame}
\begin{frame}
\begin{block}{3rd part}
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            &=&a^2+ab+ba+b^2\\
            &=&a^2+ab+ab+b^2\\
           &=& a^2+2ab+b^2\\
       \end{eqnarray*}}
       \end{block}
   \end{frame}
   \begin{frame}
   \begin{block}{3rd part}
   {$tan(\alpha +\beta+\gamma)$=$\frac{tan(\alpha+\beta)+tan\gamma}{1-tan(\alpha+\beta)tan\gamma}$}\\
   =\[\frac{\frac{tan\alpha+tan\beta}{1-tan\alpha tan\beta}+tan\gamma}{1-(\frac{tan\alpha+tan\beta}{1-tan\alpha tan\beta})tan\gamma}\]\\
   =\[\frac{tan\alpha+tan\beta+(1-tan\alpha tan\beta)tan\gamma}{1-tan\alpha tan\beta-(tan\alpha+tan\beta)tan\gamma}\]\\
   =\[\frac{tan\alpha+tan\beta+tan\gamma-tan\alpha tan\beta tan\gamma}{1-tan\alpha tan\beta -tan\alpha tan\gamma -tan \beta tan\gamma}\]
       \end{block}
   \end{frame}
   \begin{frame}
   \begin{block}{4th part}
  { \begin{eqnarray*}
       \prod_p \left(1-\frac{1}{p^2}\right)&=&\prod_p \frac{1}{1+\frac{1}{p^2}+\frac{1}{p^4}+\cdots}\\
       &=&\left(\left(\prod_p(1+\frac{1}{p^2}+\frac{1}{p^4}+\cdots\right)\right)^{-1}\\
       &=&\left(1+\frac{1}{2^2}+\frac{1}{3^2}+\frac{1}{4^2}+\cdots\right)^{-1}\\
       &=&\frac{6}{\pi^2}
   \end{eqnarray*}}
    \end{block}
       \end{frame}

  \end{document}
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