L I M I T S. Continuity and discontinuity of a Function

TASKS

138. Investigate a continuity of a function:

1) $f(x)=\dfrac{x}{x-3}$	2) $y=f(x)=3^{\frac{1}{x}}$.
3) $f(x)=\dfrac{x^3-x^2}{x-1}$	4) $f(x)=e^{\frac{1}{x-1}}$
5) $f(x)=\dfrac{(x-2)^3}{x-2}$	6) $f(x)=\dfrac{1}{2-x}$
7) $f(x)=\dfrac{x^2+x}{2x}$	8) $f(x)=\dfrac{2^{\frac{1}{x}}-1}{2^{\frac{1}{x}}+1}$

139. Investigate a continuity of a function:

1) $f(x)=\begin{cases}3x+1, & x<0\\ 1-4x, & x>0\\ e^2, & x=0\end{cases}$	2) $f(x)=\begin{cases}x^2+1, & x\le 0\\ 1+2x, & 0<x<2\\ x-2, & x\ge 2\end{cases}$
3) $f(x)=\begin{cases}x+3, & x<-1\\ 2, & -1\le x\le 1\\ -\dfrac{3}{x-4}, & x>1\end{cases}$	4) $f(x)=\begin{cases}x^2-2x, & x\le 1\\ 2-x, & 1<x<2\\ 4-x^2, & x\ge 2\end{cases}$
5) $f(x)=\begin{cases}x+1, & x\le 0\\ x^2+1, & 0<x\le 1\\ x+\dfrac{3}{2}, & x>1\end{cases}$	6) $f(x)=\dfrac{x-2}{x^2-3x+2}$
7) $f(x)=\begin{cases}x^2+1, & x\le 0\\ 1+2x, & 0<x<2\\ x-2, & x\ge 2\end{cases}$	