Math 126, in-class exercise 4 on limits: Name: .

1.) Calculate the following indeterminant limit:

$$\lim_{h\to 0}\left(\frac{\sqrt{x+h}-\sqrt{x}}{h}\right)$$

2.) For the piecewise-defined function $f(x)=\begin{cases} x^2+2 & if\ x<2 \\ \frac{A(2x-4)}{x^2+x-6} & if\ x\geq 2 \end{cases}$ find the value for the constant A which makes the function continuous everywhere.