Name_____ No calculators. Present neatly. Score_____.

1)
Use the limit definition to find the derivative function of $f(x)$, and then use to find an equation of the tangent line to the graph of $f(x)$ at $x=4$.

$$f(x)=\sqrt{x}+\frac{3}{x-1}$$ (8 points)

2) True or False? Explain. "If a function is continuous at x=a, then it is also differentiable at x=a." (2 points)

Your work:

Name_____ No calculators. Present neatly. Score_____.

1)
Use the limit definition to find the derivative function of $f(x)$, and then use to find an equation of the tangent line to the graph of $f(x)$ at $x=5$.

$$f(x)=\sqrt{x-1}+\frac{5}{x}$$ (8 points)

2) Briefly discuss the ways in which a function can fail to be differentiable.
(2 points)

Your work: