**Warm Up**

**Day 61**

**Based on 2011 Form B Number 4**

Consider the function $f\left(x\right)=\frac{-2}{x^{2}}+\frac{1}{x}+3$.

A. Show that the first derivative of this function is equal to$ f^{'}(x)=(4-x)x^{-3}$

B. Find the x-coordinate of the critical points of f(x). Determine whether the critical point(s) is a relative maximum, relative minimum or neither.

C. Find the second derivative of f(x)…...do NOT use product rule.

D. Determine the intervals where the function is increasing and decreasing.

D. Find the absolute maximum and minimum of this function over the interval [1, 10].