Name: _____ Date: _____ Period: _____ 2016

AP Calculus – Worksheet – Extreme Values of Functions on an Interval

Use analytical methods to find the minimums and maximums of the functions below.

1. $y = 2x^2 - 14x$, $[-4, 6]$

2. $y = 3x - 12x^2$, $[-3, 5]$

3. $y = x^2 - 4x - 5$, $[3, 6]$

4. $y = x^3 - 3x + 5$, $[-3, 2]$

5. $y = (x+4)(x-1)(x+2)$, $[-5, 2]$

6. $y = 16x^2 - 256x$, $[0, 8]$

7. $y = \sqrt{x-4}$, $[4, 20]$

8. $y = \dfrac{x^2 - 1}{x}$, $[-3, 4]$ and $x \neq 0$

9. $y = x^4 - 8x^2 + 12x$, $[-3, 3]$

10. $y = x^{2/3}$, $[-64, 64]$