

Name \_\_\_\_\_

Calculus Quiz Review – Area Approximation and Summations

**Part I – Find the instructed area approximations:**

1)  $y = -x^2 + 9$   $[-2,2]$  inscribed with 8 sub-intervals.

2)  $y = x^2 - 5x + 9$   $[0,5]$  find all three approximations (inscribed, circumscribed, trapezoidal) with 5 subintervals.

**Part II – Find the following summations, using Riemann Sums formulas:**

3) 17  
$$\sum_{k=1} k^2$$

4) 25  
$$\sum_{k=1} 2k^2 + 3k$$

5) 9  
$$\sum_{k=4} 7k^3$$

6) 109  
$$\sum_{k=6} 2k^2 - 5k$$