Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Algebra II

Score: \_\_\_\_\_\_ / 30

Period: \_\_\_\_\_\_\_\_\_\_\_\_\_ **Cumulative Review #2.1**

***Directions:*** Show all work in order to receive full credit. A correct answer with no supporting work will only receive one credit. Be sure to show all appropriate formulas and formula substitutions as part of your work.

1. When the expression $(x+2)²+4(x+2)+3$ is rewritten as the product of two binomials, the result is **[show all work]**
	1. $(x+3)(x+1)$
	2. $(x+5)(x+3)$
	3. $(x+2)(x+2)$
	4. $(x+6)(x+1)$
2. Which statement(s) are true for all real numbers? (i.e. Which ones can you prove?) **[show all work]**
3. $(x-y)²=x²+y²$
4. $(x+y)³=x³+3xy+y³$
	1. I, only
	2. II, only
	3. I and II
	4. Neither I nor II
5. Factor *completely* over the set of integers: $16x^{4}-81$
6. The expression $6-(3x-2i)² $is equivalent to **[show all work]**
	1. **-**$9x²+12xi+10$
	2. $9x²-12xi+2$
	3. $-9x²+10$
	4. $-9x²+12xi-4i+6$
7. The solution set for the equation $b=\sqrt{2b^{2}-64}$ is
	1. $\{-8\}$
	2. $\{8\}$
	3. $\{\pm 8\}$
	4. $\{ \}$
8. Determine an equation for the parabola with focus $(4,-1)$ and directrix $y=-5$. [Use of the grid is optional]

