Honors Math 2 **Unit 2 Review Sheet** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part I. Factor by the indicated method.**

Completing the square Quadratic Formula Quadratic Formula

1. $y=x^{2}-8x+13$ 2. $y=x^{2}+8x-4$ 3. $4x^{2}-6x-14=0$

**Part II. Solve the following quadratic equations by factoring, quadratic formula, or completing the square. You may choose.**

4. $10x^{2}=30$ 5. $x^{2}+x-20=0$ 6. $2x^{2}+7x+1=5$

7. $2x^{2}= -7x-6$8. 3x2 – 8x = 3 9. x2 + x = 30

**Part III. Give an example of a discriminant that would indicate each:**

10. 2 real, rational roots: 11. 2 real, irrational roots:

12. 2 imaginary roots: 13. 1 real root:

**Part IV. List ALL categories from the number system each number falls into.**

14. 7 15. $\frac{5}{7}$ 16. $\sqrt{3}$ 17. 17

**Part IV. Simplify or Solve**

1. $i+4i\left(3-i\right)$ 19. $2\left(x-9\right)^{2}=144$ 20. $i^{8}$