Honors Math 2 **Unit 1 Review Sheet** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part I. Factor the GCF out of each polynomial.**

1. $24x^{2}-8x$ 2. $18m^{2}n^{4}-12m^{2}n^{3}+24m^{2}n^{2}$ 3. 14x4y + 7x2y5  $-$ 28x3y3

**Part II. Factor the following completely.**

$4. 9x^{2}-6x+1$ 5. y2 – 11y + 18 6. 3x2 + 4x - 7

7. $6x^{2}-54$ 8. $x^{2}+2xy+ y^{2}$ 9. $x^{2}+2x+xy+2y$

10. $5c+20c^{2}+20c^{3}$ 11. $20r^{3}-5r$

**Part III. Solve the following quadratic equations by factoring.**

12. $9x^{2}- 12x-8=4$ 13. $x^{2}+5x-14=0$ 14. $8x^{2}=72$

15. $n^{2} + 8n = -15$ 16. $6x^{2} + 2x = 0$ 17. $3x^{2} = 2 – 5x$

18. $3r^{2} - 33r + 98= 2r^{2}-22r+68$ 19. $n^{2}+ 7n =2n+36$ 20. $x^{2}=16x-15$

21. If the zeros of a quadratic are $-1$ and 4 which of the following could have been the quadratic equation.

 **a.** $x^{2}-3x-4$ **b.** $x^{2}+5x+4$ **c.** $x^{2}+3x-4$ **d.** $x^{2}-5x+4$

Simplify each of the following.

22. $\left(3x-1\right)^{2}+\left(2x-8\right)$

23. $5x\left(2x^{2}+3x-2\right)-\left(4x^{2}+3x-9\right)$

24. $-2\left(a^{2}-5b+3\right)\left(a-b\right)+b^{2}-\left(3a-2b\right)$

25. $\left(4m-3\right)\left(4m+3\right)$

26. $2y\left(4x+7\right)+\left(3y-2\right)\left(5x+3\right)$

27. $\left(r+7\right)\left(r^{2}-2r-9\right)$

**It is also a good idea to review and practice problems from:**

* **Notes**
* **Homework**
* **Quizzes/Entrance Tickets**