Exam Review #4: Unit 8: Factoring Algebra 1 Kitt

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_

**3 Methods of Factoring:**

1) **Greatest Common Factoring** (Backwards Distribution) (Hint: Is there a GCF?)

2) **Trinomials** $x^{2}+bx+c$ (3 terms, what multiplies to c that adds to b?)

3) **Differences of Squares** (binomial, minus sign, square roots)

**Directions**: *Determine which method of factoring is going to be used for each polynomial. Factor the polynomial.*

1. $2x^{2}+8x$ 2. $x^{2}-16$ 3. $x^{2}-12x+32$

4. $x^{2}+8x+12$ 5. $4x^{2}-25$ 6. $x^{2}+6x+8$

7. 3$x^{2}-9x$ 8. $x^{2}-2x-63$ 9. $x^{2}-5x$

**Directions**: *Determine the Greatest Common Factor between the following:*

 10. $54, 80$ 11. $12x^{2}y^{4}, 28x^{5}y^{3}$

**Directions**:  *Solve each polynomial by factoring.*

12. $x^{2}+4x=0$ 13. $x^{2}-13x+30=0$ 14. $x^{2}-8x+12=0$

15. $x^{2}-25=0$ 16. $x^{2}-2x=0$ 17. $x^{2}+2x-63=0$