**Unit 2 Factoring Alternative Assignment Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_**

This alternative assignment is to make up work missed on the 3 factoring worksheets, which included over 100 problems. Factoring is a **crucial** part of Algebra II – a non-negotiable skill to move on to the next level of math, including second semester.

1. How do you factor out a Greatest Common Factor (GCF)? Explain the process in choosing the numerical GCF and the GCF of the variable(s). Write 2 examples and explain for each.
2. How do you factor using the difference of 2 squares method? Explain the process in determining if you can factor using this method. Why does one sign have to be + and the other -? Write 2 examples and explain for each.
3. How do you factor a trinomial in the form $ax^{2}+bx+c=0$ when a = 1? Explain why the 2 numbers chosen for the factors must add up and multiply to the numbers they do. Write 2 examples and explain for each.
4. How do you factor a trinomial in the form $ax^{2}+bx+c=0$ when a ≠ 1? Write 2 examples and explain for each.
5. Factor each. You must show all your work. Multiply each out to check your answers. You may do on a separate sheet of paper, if needed.

a) 6c3d – 12c2d2 + 3cd b) 3x2 – 6x – 30 c) ay – 4aw – 12a

d) c3 – c2 + 2c e) 2ma + 4mb + 2mc f) 9ab2 – 6ab – 3a

g) 15x3y3z3 – 5xyz h) 24x11 + 4x10 – 6x9 + 2x8 i) x2 – 5x + 6

j) x2 – 11x + 10k) x2 – 11x – 42l) x2 – 9

m) x2 – 36 n) x2 – 121 o) 64x2 – 81

p) 9x2 – 25 q) 144x2 – 49 r) x2 – 225

s) 2x2 + 15x + 7 t) 3x2 – 5x – 12 u) 9x2 + 11x + 2

v) 7x2 – 22x + 3 w) 4x2 + 20x + 24 x) 10x2 – 80x + 150

y) 9x2 + 90x – 99 z) 3x3 + 27x2 + 60x