

SHOW ALL WORK

1 – 9. Simplify the following:

_____ 1. $4x^2(-2x^3)$

_____ 2. $(-4a^5)^3$

_____ 3. $\left(\frac{1}{2}\right)^0$

_____ 4. Write an equivalent expression using only positive exponents: $\frac{x^4 w^{-2}}{y^3 w^3}$

_____ 5. $(3x^2 + 5x - 4) + (x^2 - x - 7)$

_____ 6. $(4x^2 + 2x - 1) - (2x^2 - 3x - 6)$

_____ 7. $(3a^2 + 5a - 2)(a - 7)$

_____ 8. $(5n + 4)(n - 2)$

_____ 9. $(4x^3 + 3x + 5) - (2x^2 + 4x + 1)$

10 – 20. Factor the following completely:

_____ 10. $n + nt^2$

_____ 11. $14 a^2b^3 - 21ab^4$

_____ 12. $h^2 - 64$

_____ 13. $(a + b)^2 - 81$

_____ 14. $x^2 - 8x + 16$

_____ 15. $25 + 10a + a^2$

_____ 16. $y^2 - y - 12$

_____ 17. $2c^2 - 9c - 5$

_____ 18. $8x^3 - 27$

_____ 19. $2x^4 - 32$

_____ 20. $2y^6 + 128$

BONUS: Factor COMPLETELY: $m^3a^4 + 8a^4 - m^3b^4 - 8b^4$