Algebra 2 S1 Name: _____ Block: _____

Topic: Polynomials Solving Polynomials Review

4	In addition a 3.0, demonstrate in-depth inferences & applications that go beyond the learning goal.
3	☐ Solve quadratic equations in one variable by factoring ☐ Determine if a given binomial is a factor of a polynomial; if so, completely factor the polynomial (#4)
2	☐ *Recognize or recall specific vocabulary such as: monic, roots, end behavior* ☐ Factoring – showing expressions in different representations ▪ Non-monic ▪ Factor by grouping ☐ Find the remainder using ▪ The Remainder Theorem (#1) ▪ Divide polynomials (#1, 2)
1	Student performance reflects insufficient progress towards foundational skills and knowledge.

Factor and solve each polynomial, if possible.

1. $2x^2 - 10x$ $x=0,\ x=5$
2. $x^3 - 3x^2$ $x=3, \pm 0$
3. $13x^2 - 169x$ $x=0, 13$
4. $-15x + 15x^3$ $x=0, 1, -1$
5. $23x^4 - 92x^2$ $x=\pm 0, 2, -2$
6. $4x^3 - 8x^2 + 4x^4$ $x=\pm 0, -2, 1$
7. $3x^3 - 3x^2 + 6x$ $x=0, 2, -1$
8. $18x^2 - 2$ $x=-1/3, 1/3$
9. $4n^2 - 49$ $n=-\frac{7}{2}, \frac{7}{2}$
10. $72k^2 - 2$ $k=-1/6, 1/6$
11. $9x^2 - 16y^2$ cant solve
12. $36x^4 - 25x^2$ $x=\pm 0, -5/6, 5/6$
13. $b^2 + 8b + 7$ $x=-7, -1$
14. $n^2 - 11n + 10$ $n=10, 1$
15. $3n^3 - 15n^2 + 18n$ $n=0, 2, 3$
16. $4n^3 + 24n^2 + 32n$ $n=0, -2, -4$
17. $2a^2 - 2a - 180$ $a=-9, 10$
18. $p^2 + 11p + 10$ $p=-10, -1$
19. $2x^2 + 5x + 2$ $x=-2, -1/2$
20. $7x^2 - 29x + 4$ $x=-4, -1/7$
21. $10x^2 - 7x - 3$ $x=1, -3/10$
22. $5x^2 + 13x + 6$ $x=-2, -3/5$
23. $2x^2 + 5x + 3$ $x=-1, -3/2$
24. $5x^2 + 29x - 6$ $x=-6, 1/5$
25. $14x^2 + 18x + 4$ $x=-1, -4/14$
26. $15x^2 - 50x + 15$ $x=-3, -1/3$
27. $8x^3 - 64x^2 + x - 8$ $x=8, \pm\sqrt{-\frac{1}{8}}$
28. $6x^3 - 16x^2 + 21x - 56$ $x=8/3, \pm\sqrt{-\frac{7}{2}}$
29. $96x^3 - 84x^2 + 112x - 98$ $x=7/8, \pm\sqrt{\frac{-14}{12}}$
30. $28x^3 + 16x^2 - 21x - 12$ $x=-\frac{4}{7}, \pm\sqrt{\frac{3}{4}}$