Algebra 2 S1 Name: _____ Block: _____

Topic: Polynomials — Remainder Theorem

	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
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 ▪ Divide polynomials
1	Student performance reflects insufficient progress towards foundational skills and knowledge.

Determine if the given binomial is a factor of the given polynomial. Show your work. (Choose 4 problems to complete. Do the rest for more practice).

1. $(x^3 - x^2 - x - 2) \div (x - 2)$

R=0 yes

2. $(x^4 - 8x^3 - x^2 + 62x - 34) \div (x - 7)$

R=8 no

3. $(x^4 + 9x^3 + 14x^2 + 50x + 9) \div (x + 8)$

R=-7 no

4. $(x^4 + 6x^3 + 11x^2 + 29x - 13) \div (x + 5)$

R=-8 no

5. $(x^4 - 8x^3 + 10x^2 + 2x + 4) \div (x - 2)$

R=0 yes

6. $(x^4 - 25x^3 - 7x^2 - 37x - 18) \div (x + 5)$

R=3742 no

7. $(x^5 + 6x^4 - 3x^2 - 22x - 29) \div (x + 6)$

R=751 no

8. $(x^4 + 10x^3 + 21x^2 + 6x - 8) \div (x + 2)$

R=0 yes