Reassessment Review

**IF1: I can factor and solve quadratics (Optional)**

Study factoring by gcf, grouping, long and short abc, difference of squares. Also study Quadratic Formula.

Factor the following:

9. $125x^{2}-36$ 3. $ 2x^{2}+4x-70$

Solve the following:

13. $2x^{2}+1=3x$ 14. $5x^{2}=50x$ (hint: QF)

**IF2: Complex Numbers (Optional)**

Know how to work with imaginary numbers (i).

1. $\sqrt{-25}$ 2. $\left(3+2i\right)+(4-11i)$

3. $(4+2i)(7+3i)$ 4. $4i\sqrt{-100}$

**IF3: Operations with Polynomials (Optional)**

Study how to add/subtract/multiply polynomials.

1. $(20x^{2}+15x+13)+(-19x^{2}+$17) 2. $(-18x^{3}+4x -16)-(15x^{2}+ 4x – 1)$

3.  4. (x – 7)(x2 – 6x + 3)

**IF4: Factoring ALL polynomials (Mandatory)**

Study ALL types of factoring.

1. $144x^{2}-289$ 2. $2x^{4}+7x^{2}-30$

3. $27x^{3}-64$ 4. $x^{3}+125$

**IF5: Solving ALL polynomials (Mandatory)**

This was your last test. Study setting each factor to zero, dividing polynomials, rational root theorem, and writing equations.

Find all roots.

1. $\left(3x-1\right)\left(x+2\right)\left(x-4\right)=0$ 2. $x^{3}=216$

Divide each polynomial to decide if the dividend is a factor

3. $(2x^{3}+7x^{2}-7x-30)÷(x+3)$ 4. $(4x^{3}-2x+1)÷(x-2)$

5. Use Rational Root Theorem to find all possible zeros of: $3x^{6}+6x-8x+10=0$

Write the equation given the roots:

6. $x=3,5,i$ 7. $x=0,0,2$