Did you FACTOR this CA into your plans?                Name_____

# Corrective Assignment

**Factor completely by factoring out a GCF, then factoring the remaining trinomial.**

1) $x^3 - x^2 - 2x$

2) $x^3 - 5x^2 + 4x$

3) $x^3 - 4x^2 + 4x$

4) $x^3 - 25x$

**Factor each sum of cubes.**

5) $x^3 - 8$

6) $27x^3 - 64$

**Factor each difference of cubes.**

7) $x^3 + 8$

8) $27x^3 - 8$

**Factor each completely by grouping.**

9) $8v^3 - 5v^2 - 8v + 5$

10) $25n^3 + 15n^2 + 15n + 9$

11) $2n^3 - 6n^2 - n + 3$

12) $49v^3 - 42v^2 + 14v - 12$

**Factor each quadratic form polynomial completely.**

13) $x^4 + 6x^2 - 16$

14) $m^4 - 1$

15) $x^4 - 6x^2 + 8$

16) $3u^5 - 300u$     (Take out a GCF first!)

**Solve for x.**

17) $9x^4 - 30x^2 + 25 = 0$

18) $x^3 - 4x^2 - 5x + 20 = 0$

19) $x^3 - 25x = 0$

20) $x^4 + 6x^2 - 7 = 0$

21) $x(2x - 3)(x - 2) = 0$

22) $8x^4 - 54x^2 + 81 = 0$

# Answers to Corrective Assignment

1) $x(x+1)(x-2)$

2) $x(x-4)(x-1)$

3) $x(x-2)^2$

4) $x(x+5)(x-5)$

5) $(x-2)(x^2+2x+4)$

6) $(3x-4)(9x^2+12x+16)$

7) $(x+2)(x^2-2x+4)$

8) $(3x-2)(9x^2+6x+4)$

9) $(v-1)(v+1)(8v-5)$

10) $(5n^2+3)(5n+3)$

11) $(2n^2-1)(n-3)$

12) $(7v^2+2)(7v-6)$

13) $(x^2-2)(x^2+8)$

14) $(m^2+1)(m-1)(m+1)$

15) $(x^2-2)(x-2)(x+2)$

16) $3u(u^2+10)(u^2-10)$

17) Factors to: $(3x^2-5)^2=0$

Roots: $\left\{\dfrac{\sqrt{15}}{3} \text{ mult. } 2, -\dfrac{\sqrt{15}}{3} \text{ mult. } 2\right\}$

18) Factors to: $(x-4)(x^2-5)=0$

Roots: $\{4, \sqrt{5}, -\sqrt{5}\}$

19) Factors to: $x(x+5)(x-5)=0$

Roots: $\{0, -5, 5\}$

20) Factors to: $(x-1)(x+1)(x^2+7)=0$

Roots: $\{1, -1, i\sqrt{7}, -i\sqrt{7}\}$

21) $\left\{0, \dfrac{3}{2}, 2\right\}$

22) Factors to: $(2x-3)(2x+3)(2x^2-9)=0$

Roots: $\left\{\dfrac{3}{2}, -\dfrac{3}{2}, \dfrac{3\sqrt{2}}{2}, -\dfrac{3\sqrt{2}}{2}\right\}$