

Corrective Assignment 7.3 #2**Factor completely by factoring out a GCF, then factoring the remaining polynomial**

1) $2x^4 + 4x^3 - 30x^2 = 0$

2) $x^3 + 10x^2 + 25x$

3) $x^3 - 9x^2 + 20x$

4) $x^3 - 4x$

Factor each sum of cubes.

5) $x^3 - 125$

6) $8x^3 + 1$

Factor each difference of cubes.

7) $8x^3 + 125$

8) $x^3 + 27$

Factor each completely by grouping.

9) $56n^3 - 7n^2 + 40n - 5$

10) $18x^3 + 21x^2 + 12x + 14$

11) $49n^3 - 35n^2 - 21n + 15$

12) $56v^3 + 21v^2 - 48v - 18$

Factor each quadratic form polynomial completely.

13) $5x^4 - 180$

14) $x^4 - 1$

$$15) 3a^4 - 60a^2 + 300$$

$$16) x^4 - 13x^2 + 36$$

Solve for x.

$$17) x^3 + 4x^2 - 3x - 12 = 0$$

$$18) x^3 + 2x^2 - 15x = 0$$

$$19) 8x^4 - 30x^2 + 7 = 0$$

$$20) x^4 - 10x^2 + 24 = 0$$

$$21) 15x^4 - 46x^2 + 35 = 0$$

$$22) x(5x + 1)(x + 1) = 0$$

Answers to Corrective Assignment #2

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|--|----------------------------|--|----------------------|
| 1) $2x^2(x+5)(x-3)$ | 2) $x(x+5)^2$ | 3) $x(x-4)(x-5)$ | 4) $x(x+2)(x-2)$ |
| 5) $(x-5)(x^2+5x+25)$ | 6) $(2x+1)(4x^2-2x+1)$ | 7) $(2x+5)(4x^2-10x+25)$ | |
| 8) $(x+3)(x^2-3x+9)$ | 9) $(7n^2+5)(8n-1)$ | 10) $(3x^2+2)(6x+7)$ | 11) $(7n^2-3)(7n-5)$ |
| 12) $(7v^2-6)(8v+3)$ | 13) $5(x^2-6)(x^2+6)$ | 14) $(x-1)(x+1)(x^2+1)$ | |
| 15) $3(a^2-10)^2$ | 16) $(x-2)(x+2)(x-3)(x+3)$ | | |
| 17) Factors to: $(x+4)(x^2-3)=0$
Roots: $\{-4, \sqrt{3}, -\sqrt{3}\}$ | | 18) Factors to: $x(x+5)(x-3)=0$
Roots: $\{0, -5, 3\}$ | |
| 19) Factors to: $(2x^2-7)(2x-1)(2x+1)=0$
Roots: $\left\{\frac{\sqrt{14}}{2}, -\frac{\sqrt{14}}{2}, \frac{1}{2}, -\frac{1}{2}\right\}$ | | 20) Factors to: $(x-2)(x+2)(x^2-6)=0$
Roots: $\{2, -2, \sqrt{6}, -\sqrt{6}\}$ | |
| 21) Factors to: $(5x^2-7)(3x^2-5)=0$
Roots: $\left\{\frac{\sqrt{35}}{5}, -\frac{\sqrt{35}}{5}, \frac{\sqrt{15}}{3}, -\frac{\sqrt{15}}{3}\right\}$ | | 22) $\left\{0, -\frac{1}{5}, -1\right\}$ | |