

## REVIEW WKST SOLVING POLY EQUATIONS Date \_\_\_\_\_ Period \_\_\_\_\_

**Find all roots. One root has been given.**

1)  $x^5 + 2x^4 + 2x^3 + 4x^2 - 63x - 126 = 0$ ; -2

2)  $x^6 - 5x^5 + 6x^4 - 30x^3 - 27x^2 + 135x = 0$ ; 5

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5)  $x^6 - 2x^5 + 2x^4 - 4x^3 - 3x^2 + 6x = 0$ ; 2

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1)  $x^5 + 2x^4 + 2x^3 + 4x^2 - 63x - 126 = 0$ ;  $-2$

$\{3i, -3i, \sqrt{7}, -\sqrt{7}, -2\}$

2)  $x^6 - 5x^5 + 6x^4 - 30x^3 - 27x^2 + 135x = 0$ ;  $5$

$\{0, \sqrt{3}, -\sqrt{3}, 3i, -3i, 5\}$

3)  $x^4 + 11x^3 + 55x^2 + 125x = 0$ ;  $-5$

$\{0, -3 + 4i, -3 - 4i, -5\}$

4)  $x^4 - 9x^3 + 24x^2 - 36x + 80 = 0$ ;  $5$

$\{4, 2i, -2i, 5\}$

5)  $x^6 - 2x^5 + 2x^4 - 4x^3 - 3x^2 + 6x = 0$ ;  $2$

$\{0, 1, -1, i\sqrt{3}, -i\sqrt{3}, 2\}$