

## Polynomial equations with degree $n$ when $n \in I^{+} n>2$ and $a_{n}=1$

Learning outcomes Find the $n$ root of a complex number when $n \in I^{+}$, and Solve polynomial equations of one variable with integer coefficients of degree less than or equal to three.
Intended destination Find the solution of the polynomial equations with degree n , when $n \in I^{+} n>2$ and $a_{n}=1$, The only variable is an integer coefficients Name $\qquad$ Class. $\qquad$ No. $\qquad$
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\text { Given } \quad a_{n} x^{n}+a_{n-1} x^{n-1}+a_{n-2} x^{n-2}+\ldots a x+a_{0}=0, n \in I^{+},
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when $a_{0}, a_{1}, a_{2}, \ldots a_{n} \in I, a_{0} \neq 0$ How to do this Factorization of polynomial equations up to degree 2 , then use the formula of quadratic polynomials.

Find the answers to the following equations.

| 1) $x^{4}+26 x^{2}+25=0$ <br> Solution $\left(x^{2}+25\right)\left(x^{2}+1\right)=0$ | 3) $x^{3}-x^{2}-2 x-12=0$ <br> Solution |
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| 2) $x^{4}-2 x^{3}-9 x^{2}+2 x+8=0$ <br> Solution | 4) $x^{3}+3 x^{2}+3 x+2=0$ <br> Solution |

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