

Personal Skills 1

Polynomial equations with degree n when $n \in \mathbb{I}^+$ $n > 2$, $a_n \neq 1$

Learning outcomes Find the n root of a complex number when $n \in \mathbb{I}^+$, 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 $n \in \mathbb{I}^+$ $n > 2$ and $a_n \neq 1$, The only variable is an integer coefficients



Name Class.No.....
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Find answers to the following equations.

<p>1) $2x^3 - x + 1 = 0$</p> <p><u>Solution</u> $a_0 = 1$ (k) , $a_n = 2$ (m) , $\frac{k}{m} = \pm 1, \pm \frac{1}{2}$</p> <p>$f(-1) = 2(-1)^3 - (-1) + 1 = 0$</p> <table style="margin-left: 20px; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding-right: 10px;">-1</td> <td style="padding-right: 10px;">2</td> <td style="padding-right: 10px;">0</td> <td style="padding-right: 10px;">-1</td> <td style="padding-right: 10px;">1</td> </tr> <tr> <td colspan="5" style="border-top: 1px solid black; border-bottom: 3px double black; height: 10px;"></td> </tr> <tr> <td colspan="5" style="text-align: center;">$2x^3 - x + 1 = 0$</td> </tr> <tr> <td colspan="5" style="text-align: center;">() = 0</td> </tr> </table>	-1	2	0	-1	1						$2x^3 - x + 1 = 0$					() = 0					<p>3) $5x^4 - 4x^3 + 19x^2 - 16x - 4 = 0$</p>
-1	2	0	-1	1																	
$2x^3 - x + 1 = 0$																					
() = 0																					
<p>2) $3x^4 - 4x^3 - 8x^2 + 9x - 2 = 0$</p>	<p>4) $2x^3 + 2x^2 + x + 1 = 0$</p>																				



Summary score

Score 8 points made points

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