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AN ATLAS OF INJECTIVE DOMINATION POLYNOMIALS OF GRAPHS OF ORDER AT MOST SIX

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Abstract. The injective domination polynomial of a graph G of order p is defined as

$$D_{in}(G,x)=\sum_{j=\gamma_{in}(G)}^{p} d_{in}(G,j)x^j,$$

where $\gamma_{in}(G)$ is the injective domination number of G and $d_{in}(G,j)$ is the number of injective dominating sets of G of size j, [3]. We call the roots of an injective domination polynomial of a graph the injective domination roots of that graph. In this article, we compute the injective domination polynomial of all graphs of order less than or equal six and their roots and present them in tables.

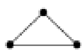
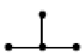
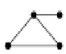
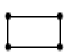
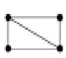
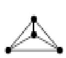
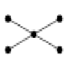
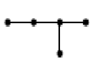
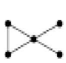
1 Introduction

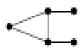
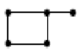
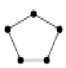
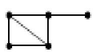
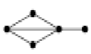
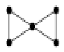
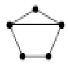
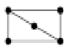
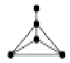
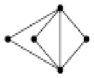
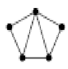
Let $G=(V,E)$ be a graph with $|V(G)|=p$ and $|E(G)|=q$. In [6], the authors have introduced a new type of domination is called the injective domination of graph. For any vertex $v\in V(G)$, the open injective neighborhood of v is defined by $N_{in}(v)=\{u\in V(G):|\Gamma(u,v)|\geq 1\}$, where $|\Gamma(u,v)|$ is the number of common neighborhood between the vertices u and v and the closed injective neighborhood is $N_{in}[v]=N_{in}(v)\cup\{v\}$. A subset S of $V(G)$ is called injective dominating set if for every vertex $v\in V-S$ there exists a vertex $u\in S$ such that $|\Gamma(u,v)|\geq 1$. The injective domination number $\gamma_{in}(G)$ of G is the minimum cardinality of such injective dominating set. For more details about the injective domination of graphs, we refer to [1, 5, 2]. The injective domination polynomial $D_{in}(G,x)$ of G is defined as $D_{in}(G,x)=\sum_{j=\gamma_{in}(G)}^{p} d_{in}(G,j)x^j$, where $\gamma_{in}(G)$ is the injective domination number of G, and $d_{in}(G,j)$ is the number of injective dominating sets of G of size j, [3]. A root of the injective domination polynomial of G is called an injective domination root of G.

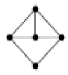
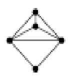
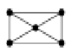
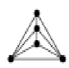
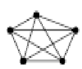
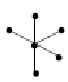
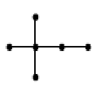
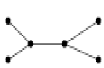
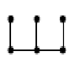
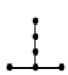
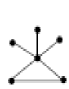
As all the types of graph polynomials, the analysis of the injective domination polynomial of graphs can give us some information about graph. Similar to the domination polynomial of graphs [7, 4], we have an atlas for injective domination polynomials and injective domination roots of graphs with order at most 6.

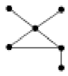
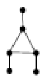
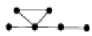
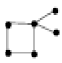
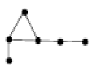
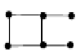
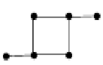
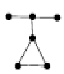
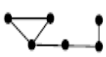
In this article, we compute the injective domination polynomial and the injective domination roots of all connected graphs of order less than or equal six and we present them in tables. Note that for the disconnected graphs one can use the following Lemma.

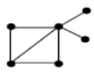
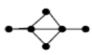
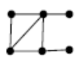
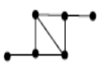
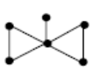
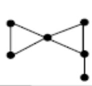
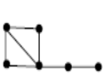
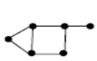
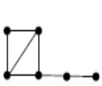
Lemma 1.1 ([3]). *If a graph G consists of m components $G_1,\ldots,G_m$, then* $D_{in}(G,x)=D_{in}(G_1,x)\ldots D_{in}(G_m,x)$.

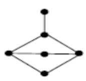
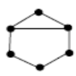
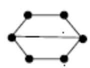
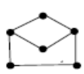
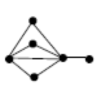
Graph	Injective Domination Polynomial	Injective Domination Roots
	x	0
	x^2	$0, 0$
	$x^3 + 2x^2$	$0, 0, -2$
	$x^3 + 3x^2 + 3x$	$0, \frac{-3\pm\sqrt{3}i}{2}$
	$x(1+x)^3 - x$	$0, 0, \frac{-3\pm\sqrt{3}i}{2}$
	$x^4 + 4x^3 + 2x^2$	$0, 0, -2 \pm \sqrt{2}$
	$x^4 + 4x^3 + 6x^2 + 3x$	$0, -1, \frac{-3\pm\sqrt{3}i}{2}$
	$x^4 + 4x^3 + 4x^2$	$0, 0, -2, -2$
	$(1+x)^4 - 1$	$-2, 0, -1 \pm i$
	$(1+x)^4 - 1$	$-2, 0, -1 \pm i$
	$x(1+x)^4 - x$	$0, 0, -2, -1 \pm i$
	$x^5 + 5x^4 + 9x^3 + 7x^2$	$0, 0, -2.54369, -1.22816 \pm 1.11514i$
	$x^5 + 5x^4 + 7x^3 + 2x^2$	$0, 0, -2, \frac{-3\pm\sqrt{5}}{2}$
	$x^5 + 5x^4 + 10x^3 + 9x^2 + 2x$	$0, -2, -0.31767, -1.34116 \pm 1.16154i$

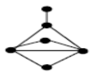
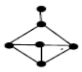
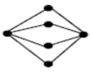
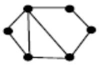
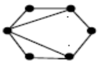
Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^5+5x^4+10x^3+8x^2+x$	$0,\ -0.15163,\ -1.66099,$ $-1.59369 \pm 1.19616i$
	$x^5+5x^4+9x^3+6x^2$	$0,0,-2,\ \frac{-3\pm\sqrt{3}i}{2}$
	$x^5+5x^4+9x^3+6x^2$	$0,0,-2,\ \frac{-3\pm\sqrt{3}i}{2}$
	$x^5+5x^4+10x^3+5x^2$	$0,0,\ -0.72432,\ -2.13784 \pm 1.52731i$
	$x^5+5x^4+10x^3+9x^2+2x$	$0,\ -2,\ -0.31767,\ -1.34116 \pm 1.16154i$
	$x^5+5x^4+10x^3+10x^2+3x$	$0,\ -0.48121,\ -2.29065,$ $-1.11407 \pm 1.21675i$
	$(1+x)^5-1$	$0,\ -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$x^5+5x^4+10x^3+8x^2+x$	$0,\ -0.15163,\ -1.66099,$ $-1.59369 \pm 1.19616i$
	$x^5+5x^4+9x^3+6x^2$	$0,0,-2,\ \frac{-3\pm\sqrt{3}i}{2}$
	$x^5+5x^4+10x^3+10x^2+3x$	$0,\ -0.48121,\ -2.29065,$ $-1.11407 \pm 1.21675i$
	$(1+x)^5-1$	$0,\ -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$(1+x)^5-1$	$0,\ -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^5+5x^4+10x^3+9x^2+2x$	$0, -2, -0.31767, -1.34116 \pm 1.16154i$
	$(1+x)^5-1$	$0, -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$(1+x)^5-1$	$0, -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$(1+x)^5-1$	$0, -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$(1+x)^5-1$	$0, -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$x(1+x)^5-x$	$0, 0, -0.69098 \pm 0.95106i,$ $-1.80902 \pm 0.58779i$
	$x^6+6x^5+14x^4+16x^3+8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+12x^3+3x^2$	$0, 0, -0.5694 \pm 0.06458i,$ $-2.4306 \pm 1.79663i$
	$x^6+6x^5+13x^4+11x^3+2x^2$	$0, 0, -2, -0.24512,$ $-1.87744 \pm 0.74486i$
	$x^6+6x^5+11x^4+6x^3+x^2$	$0, 0, -0.38197, -0.38197, -2.61803,$ -2.61803
	$x^6+6x^5+15x^4+19x^3+12x^2+2x$	$0, -0.24512, -1 \pm i,$ $-1.87744 \pm 0.74486i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^6+6x^5+15x^4+19x^3+11x^2+x$	$0, -0.11011, -1.15886 \pm 1.15086i, -1.78609 \pm 0.46329i$
	$x^6+6x^5+15x^4+17x^3+6x^2$	$0, 0, -2, -0.60735, -1.69632 \pm 1.43595i$
	$x^6+6x^5+14x^4+16x^3+8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6+6x^5+14x^4+16x^3+8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6+6x^5+14x^4+14x^3+4x^2$	$0, 0, -2, -0.45631, -1.77184 \pm 1.11514i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+14x^4+14x^3+4x^2$	$0, 0, -2, -0.45631, -1.77184 \pm 1.11514i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+13x^4+12x^3+3x^2$	$0, 0, -0.38197, -2.61803, -1.5 \pm 0.86603i$
	$x^6+6x^5+13x^4+11x^3+3x^2$	$0, 0, -1, -0.53443, -2.23279 \pm 0.79255i$
	$x^6+6x^5+15x^4+16x^3+5x^2$	$0, 0, -0.51274, -1.69079, -1.89824 \pm 1.4711i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i, -1.93701 \pm 0.47754i$
	$x^6+6x^5+15x^4+20x^3+13x^2+2x$	$0, -2, -0.21385, -1.78615, -1 \pm 1.27202i$
	$x^6+6x^5+15x^4+19x^3+11x^2+x$	$0, -0.11011, -1.15886 \pm 1.15086i, -1.78609 \pm 0.46329i$
	$x^6+6x^5+15x^4+20x^3+13x^2+2x$	$0, -2, -0.21385, -1.78615, -1 \pm 1.27202i$
	$x^6+6x^5+15x^4+18x^3+9x^2+2x$	$0, -2, -0.37519 \pm 0.30024i, -1.62481 \pm 1.30024i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i, -2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+19x^3+11x^2+x$	$0, -0.11011, -1.15886 \pm 1.15086i, -1.78609 \pm 0.46329i$
	$x^6+6x^5+15x^4+19x^3+12x^2+2x$	$0, -0.24512, -1 \pm i, -1.87744 \pm 0.74486i$
	$x^6+6x^5+14x^4+16x^3+8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6+6x^5+14x^4+16x^3+8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+14x^4+15x^3+5x^2$	$0, 0, -0.56832, -2.43168, -1.5 \pm 1.16963i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^6+6x^5+15x^4+17x^3+6x^2$	$0, 0, -2, -0.60735,$ $-1.69632 \pm 1.43595i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+14x^4+16x^3+8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6+6x^5+15x^4+19x^3+10x^2$	$0, 0, -2, -1.56984,$ $-1.21508 \pm 1.30714i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+13x^2$	$0, 0, -0.88982 \pm 1.39347i,$ $-2.11018 \pm 0.55036i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$x^6+6x^5+15x^4+20x^3+13x^2+2x$	$0, -2, -0.21385, -1.78615,$ $-1 \pm 1.27202i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i,$ $-2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i,$ $-2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 12x^2 + 2x$	$0, -0.24512, -1 \pm i,$ $-1.87744 \pm 0.74486i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 12x^2 + 2x$	$0, -0.24512, -1 \pm i,$ $-1.87744 \pm 0.74486i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 11x^2 + x$	$0, -0.11011, -1.15886 \pm 1.15086i,$ $-1.78609 \pm 0.46329i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 11x^2 + x$	$0, -0.11011, -1.15886 \pm 1.15086i,$ $-1.78609 \pm 0.46329i$
	$x^6 + 6x^5 + 14x^4 + 16x^3 + 8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6 + 6x^5 + 15x^4 + 18x^3 + 9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1 + x)^6 - 1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 13x^2 + 2x$	$0, -2, -0.21385, -1.78615,$ $-1 \pm 1.27202i$
	$x^6 + 6x^5 + 14x^4 + 16x^3 + 8x^2$	$0, 0, -2, -2, -1 \pm i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 11x^2 + x$	$0, -0.11011, -1.15886 \pm 1.15086i,$ $-1.78609 \pm 0.46329i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 14x^2 + 3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 11x^2 + x$	$0, -0.11011, -1.15886 \pm 1.15086i,$ $-1.78609 \pm 0.46329i$

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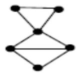
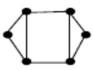
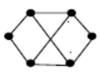
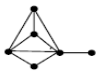
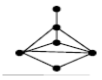
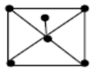
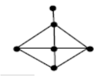
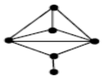
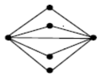
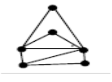
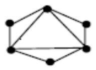
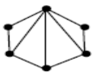
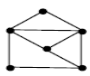
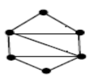
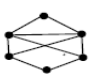
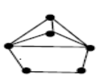
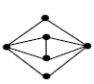
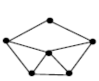
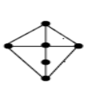
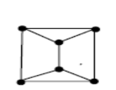
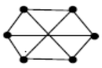
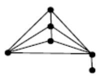
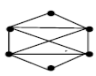
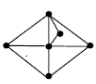
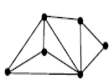
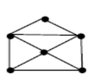
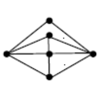
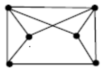
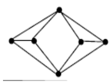
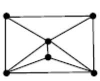
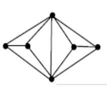
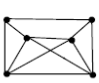
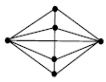
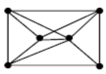
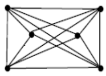
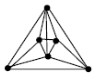
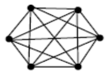
	$x^6+6x^5+15x^4+19x^3+10x^2$	$0, 0, -2, -1.56984$, $-1.21508 \pm 1.30714i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i$, $-1.93701 \pm 0.47754i$
	$x^6+6x^5+15x^4+20x^3+15x^2$	$0, 0, -0.71218 \pm 1.41609i$, $-2.28782 \pm 0.8579i$
	$x^6+6x^5+15x^4+20x^3+13x^2+2x$	$0, -2, -0.21385, -1.78615$, $-1 \pm 1.27202i$
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i$, $-2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i$, $-1.93701 \pm 0.47754i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i$, $-2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i$, $-1.93701 \pm 0.47754i$
	$x^6+6x^5+15x^4+19x^3+12x^2+2x$	$0, -0.24512, -1 \pm i$, $-1.87744 \pm 0.74486i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$(1+x)^6 - 1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6 - 1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6 - 1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 14x^2 + 3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 15x^2 + 4x$	$0, -0.49134, -0.74249 \pm 1.11879i,$ $-2.01184 \pm 0.68396i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 12x^2 + 2x$	$0, -0.24512, -1 \pm i,$ $-1.87744 \pm 0.74486i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 13x^2 + 2x$	$0, -2, -0.21385, -1.78615,$ $-1 \pm 1.27202i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 13x^2 + 2x$	$0, -2, -0.21385, -1.78615,$ $-1 \pm 1.27202i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 14x^2 + 3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 15x^2 + 4x$	$0, -0.49134, -0.74249 \pm 1.11879i,$ $-2.01184 \pm 0.68396i$
	$x^6 + 6x^5 + 15x^4 + 19x^3 + 11x^2 + x$	$0, -0.11011, -1.15886 \pm 1.15086i,$ $-1.78609 \pm 0.46329i$
	$x^6 + 6x^5 + 15x^4 + 20x^3 + 15x^2$	$0, 0, -0.71218 \pm 1.41609i,$ $-2.28782 \pm 0.8579i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^6+6x^5+15x^4+18x^3+9x^2$	$0, 0, -1.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i,$ $-2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i,$ $-2.01184 \pm 0.68396i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i,$ $-1.93701 \pm 0.47754i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i, -2.01184 \pm 0.68396i$
	$x^6+6x^5+15x^4+19x^3+12x^2+2x$	$0, -0.24512, -1 \pm i, -1.87744 \pm 0.74486i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i, -2.01184 \pm 0.68396i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+14x^2+3x$	$0, -0.34818, -0.8889 \pm 1.17249i, -1.93701 \pm 0.47754i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$x^6+6x^5+15x^4+20x^3+15x^2+4x$	$0, -0.49134, -0.74249 \pm 1.11879i, -2.01184 \pm 0.68396i$

Graph	Injective Domination Polynomial	Injective Domination Roots
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$
	$(1+x)^6-1$	$0, -2, -0.5 \pm 0.86603i, -1.5 \pm 0.86603i$

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