

```

In[1]:= Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,15->31,15->32,31->63,31->64}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,15->31,15->32,32->65,32->66}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,15->31,15->32,16->33,16->34}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,8->17,8->18,15->31,15->32}]

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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,7->15,7->16,15->31,15->32}]

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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,7->15,7->16,15->31,15->32}]

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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,16->33,16->34,33->67,33->68}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,16->33,16->34,34->69,34->70}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
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Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * a1 - d
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,7->15,7->16,16->33,16->34}]

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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * a1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,8->17,8->18,17->35,17->36}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,7->15,7->16,8->17,8->18,18->37,18->38}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,7->15,7->16,9->19,9->20}]]

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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,5->11,5->12,7->15,7->16}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (c1 * G - b
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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,8->17,8->18,17->35,17->36,35->71,35->72}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,8->17,8->18,17->35,17->36,36->73,36->74}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1

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Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,8->17,8->18,18->37,18->38,37->75,37->76}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (c
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,8->17,8->18,18->37,18->38,38->77,38->78}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (c1 * G - d1
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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,9->19,9->20,19->39,19->40}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (a1 * c1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (a
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,9->19,9->20,20->41,20->42}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (a1 * c1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (a
Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,9->19,9->20,10->21,10->22}]]

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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,10->21,10->22,21->43,21->44}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (a1 * c1 - b
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Graph[{0->1,0->2,1->3,1->4,3->7,3->8,4->9,4->10,10->21,10->22,22->45,22->46}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (a1 * c1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (a
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,4->9,4->10,10->21,10->22}]]

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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,4->9,4->10,5->11,5->12}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (a1 * a1 - |
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,4->9,4->10,6->13,6->14}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (a1 * a1 - |
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,5->11,5->12,12->25,12->26}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (a1 * G - b
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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,5->11,5->12,6->13,6->14}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (a1 * G - b
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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,6->13,6->14,13->27,13->28}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (a1 * G - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,3->7,3->8,6->13,6->14,14->29,14->30}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (a1 * G - b
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Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,19->39,19->40,39->79,39->80}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,19->39,19->40,40->81,40->82}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,19->39,19->40,20->41,20->42}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,10->21,10->22,19->39,19->40}]]

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Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,20->41,20->42,41->83,41->84}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F

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Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,20->41,20->42,42->85,42->86}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,10->21,10->22,20->41,20->42}]

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Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * a1), b1 == x * (G * c1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * a1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,10->21,10->22,21->43,21->44}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,9->19,9->20,10->21,10->22,22->45,22->46}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,9->19,9->20,10->21,10->22}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * a1), b1 == x * (G * c1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * a1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,5->11,5->12,9->19,9->20}]

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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,6->13,6->14,9->19,9->20}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (G * d1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,10->21,10->22,21->43,21->44,43->87,43->88}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,10->21,10->22,21->43,21->44,44->89,44->90}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,10->21,10->22,21->43,21->44,22->45,22->46}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F

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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,10->21,10->22,21->43,21->44}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * a1), b1 == x * (G * c1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * a1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,10->21,10->22,22->45,22->46,45->91,45->92}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,4->9,4->10,10->21,10->22,22->45,22->46,46->93,46->94}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * G), b1 == x * (G * c1 - b1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * F), b1 == x * (F
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,10->21,10->22,22->45,22->46}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * a1), b1 == x * (G * c1 - b
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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,5->11,5->12,10->21,10->22}]

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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,6->13,6->14,10->21,10->22}]

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Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,5->11,5->12,12->25,12->26}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (G * a1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,5->11,5->12,6->13,6->14}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (G * a1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,6->13,6->14,13->27,13->28}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (G * a1 - b
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,4->9,4->10,6->13,6->14,14->29,14->30}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - b1 * c1), b1 == x * (G * a1 - b

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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * b1 * c1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,11->23,11->24,23->47,23->48}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * G - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,11->23,11->24,24->49,24->50}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * G - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,11->23,11->24,12->25,12->26}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * G - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,6->13,6->14,11->23,11->24}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * a1 -
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,12->25,12->26,25->51,25->52}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * G - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,12->25,12->26,26->53,26->54}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * G - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,6->13,6->14,12->25,12->26}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (c1 * a1 -
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,6->13,6->14,13->27,13->28}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (a1 * c1 -
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,5->11,5->12,6->13,6->14,14->29,14->30}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (a1 * c1 -
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,6->13,6->14,13->27,13->28,27->55,27->56}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (G * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,6->13,6->14,13->27,13->28,28->57,28->58}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (G * c1 - a

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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,6->13,6->14,13->27,13->28,14->29,14->30}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (G * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,6->13,6->14,14->29,14->30,29->59,29->60}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (G * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,1->3,1->4,2->5,2->6,6->13,6->14,14->29,14->30,30->61,30->62}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - a1 * b1), b1 == x * (G * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * a1 * b1), b1 == x * (
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,23->47,23->48,47->95,47->96}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,23->47,23->48,48->97,48->98}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,23->47,23->48,24->49,24->50}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,12->25,12->26,23->47,23->48}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,11->23,11->24,23->47,23->48}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * a1 - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,24->49,24->50,49->99,49->100}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,24->49,24->50,50->101,50->102}]]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,12->25,12->26,24->49,24->50}]]

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Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
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Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,12->25,12->26,25->51,25->52}]

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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,11->23,11->24,12->25,12->26,26->53,26->54}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
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Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,11->23,11->24,12->25,12->26}]

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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,12->25,12->26,25->51,25->52,51->103,51->104}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,12->25,12->26,25->51,25->52,52->105,52->106}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,12->25,12->26,25->51,25->52,26->53,26->54}]

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Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,12->25,12->26,25->51,25->52}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * a1 - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,12->25,12->26,26->53,26->54,53->107,53->108}]

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Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,12->25,12->26,26->53,26->54,54->109,54->110}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * G - c1
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,12->25,12->26,26->53,26->54}]

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Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,12->25,12->26,13->27,13->28}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (c1 * d1 - c
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
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Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (c
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,13->27,13->28,27->55,27->56}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (a1 * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (a
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,13->27,13->28,28->57,28->58}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (a1 * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (a
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,13->27,13->28,14->29,14->30}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (a1 * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (a
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,14->29,14->30,29->59,29->60}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (a1 * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (a
Graph[{0->1,0->2,2->5,2->6,5->11,5->12,6->13,6->14,14->29,14->30,30->61,30->62}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (a1 * c1 - a
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (a
Graph[{0->1,0->2,2->5,2->6,6->13,6->14,13->27,13->28,27->55,27->56,55->111,55->112}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (G * c1 - G
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (F

```

[illegible]

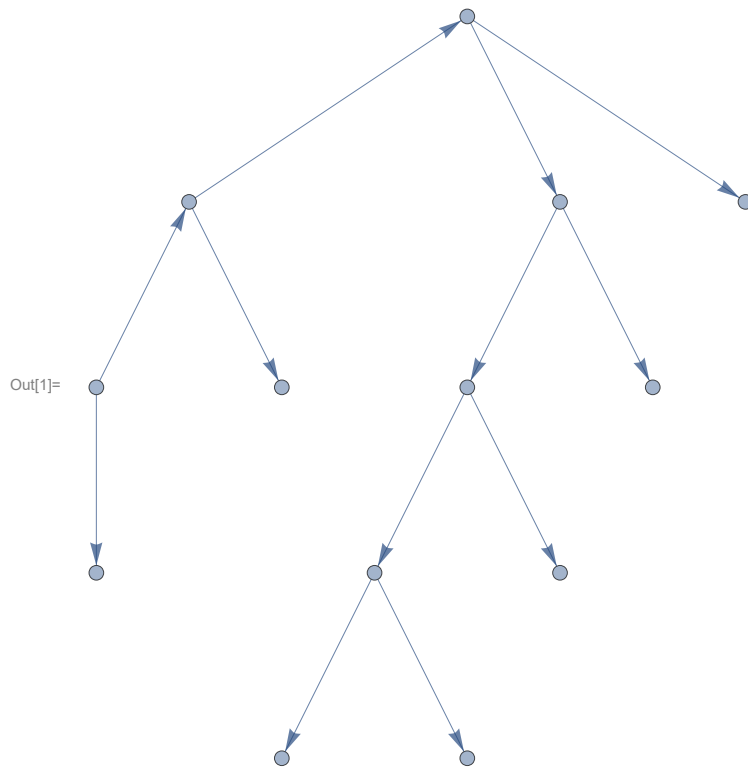
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Graph[{0->1,0->2,2->5,2->6,6->13,6->14,14->29,14->30,30->61,30->62,61->123,61->124}]

Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (G * c1 - G
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (F
Graph[{0->1,0->2,2->5,2->6,6->13,6->14,14->29,14->30,30->61,30->62,62->125,62->126}]

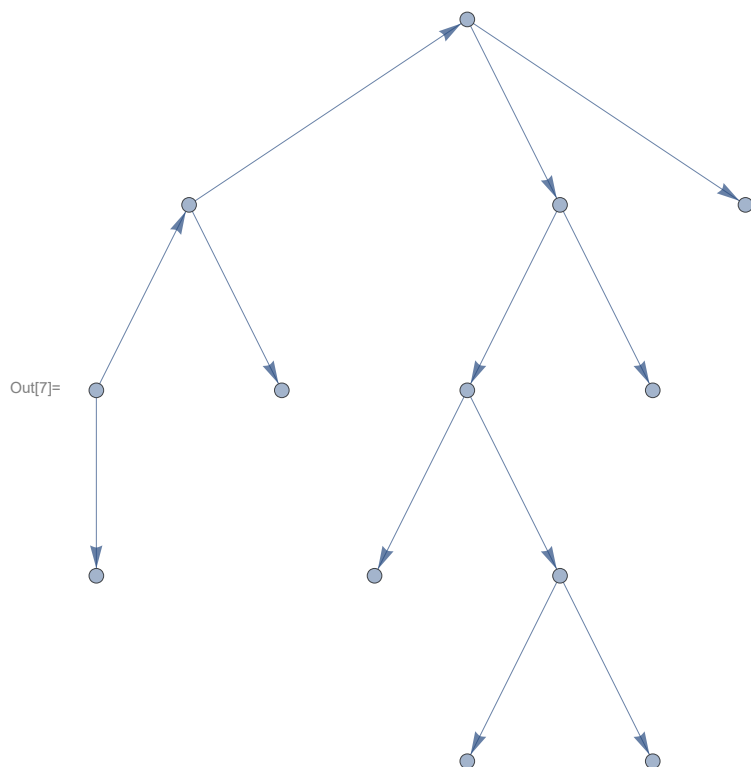
Collect[GroebnerBasis[{G == x + a1, a1 == x * (G * G - G * b1), b1 == x * (G * c1 - G
Collect[GroebnerBasis[{F == x + a1, a1 == x * (F * F + (y - 1) * F * b1), b1 == x * (F

```



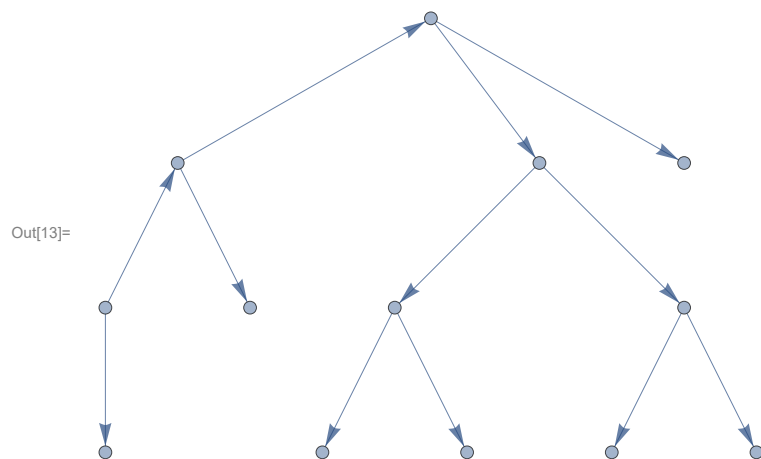
$$\text{Out[3]} = \{x + G^2 x^3 + G^3 x^4 + G^4 x^5 + G^5 x^6 + G(-1 + x^2)\}$$

$$\text{Out[5]} = \{-x + F(1 - x^2 + x^2 y) + F^2(-x^3 - xy + x^3 y) + F^3(-x^4 + x^4 y) + F^4(-x^5 + x^5 y) + F^5(-x^6 + x^6 y)\}$$



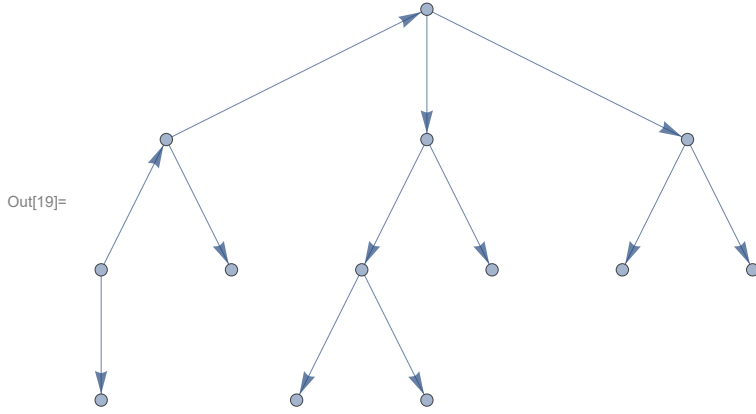
$$\text{Out[9]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[11]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



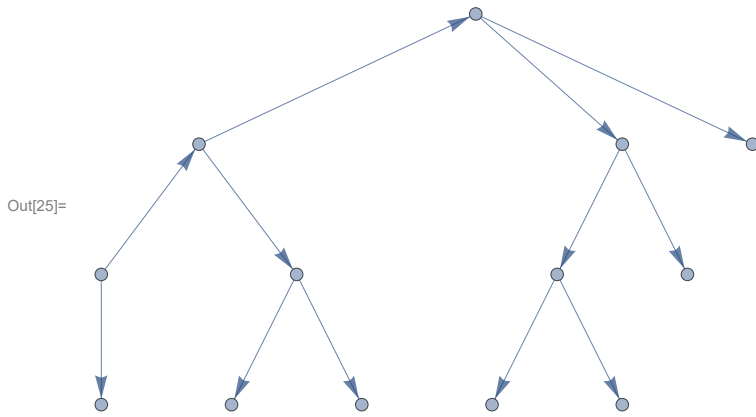
$$\text{Out[15]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[17]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[21]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

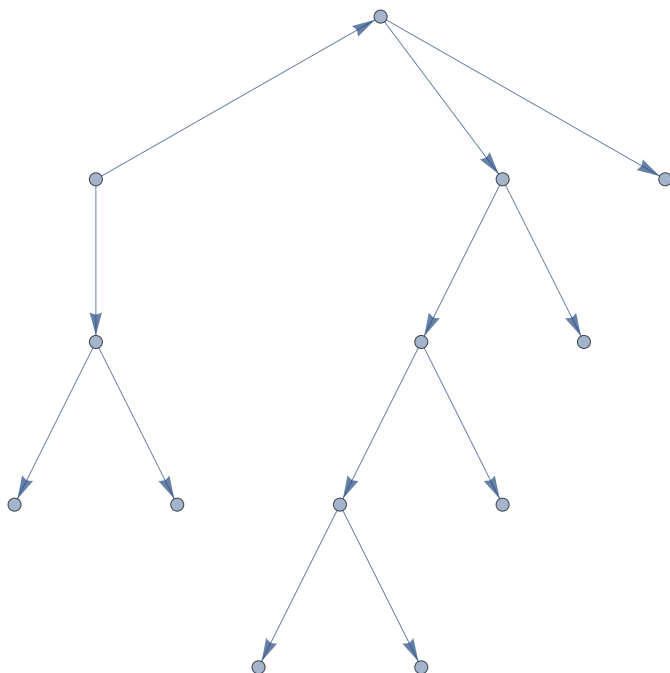
$$\text{Out[23]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[27]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[29]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$

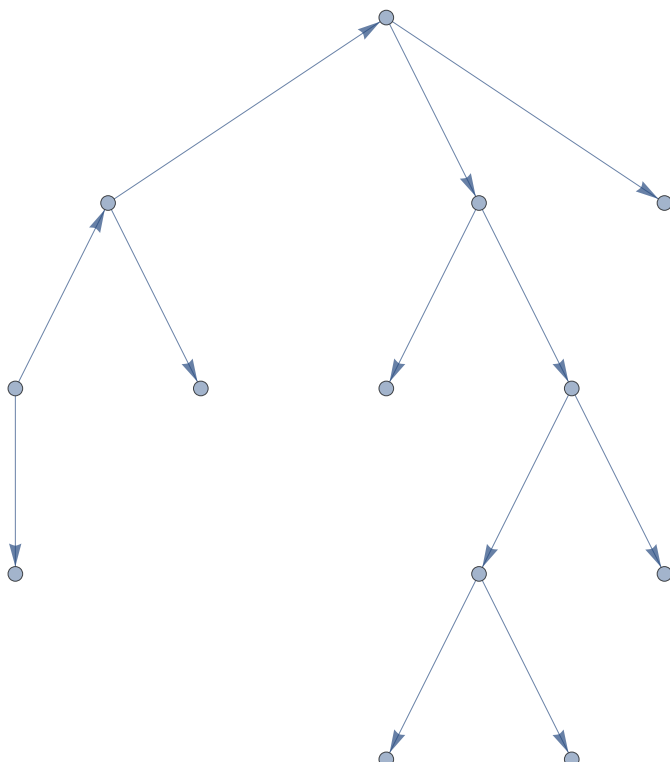
Out[31]=



$$\text{Out[33]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[35]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$

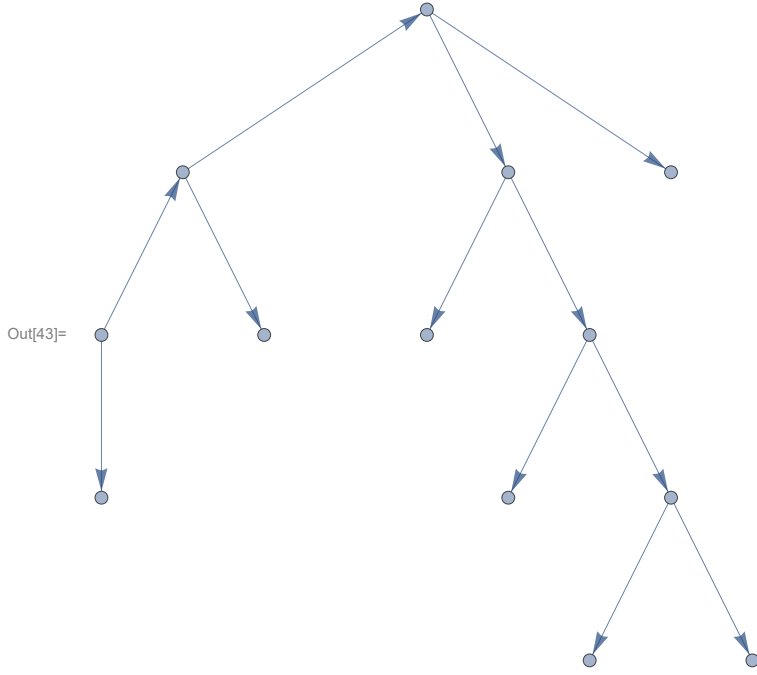
Out[37]=



$$\text{Out[39]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

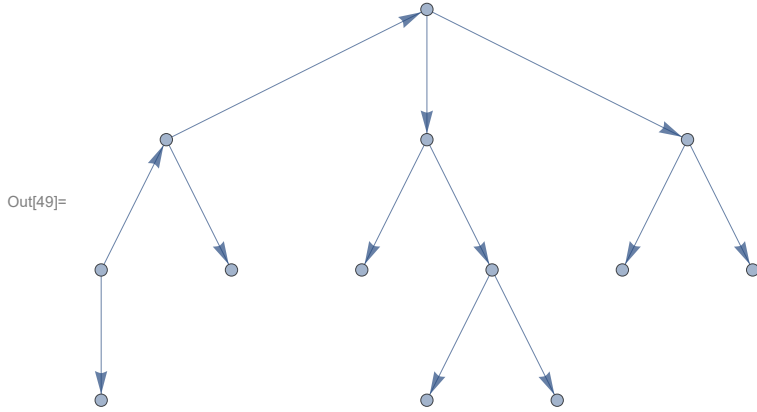
$$\text{Out[41]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$





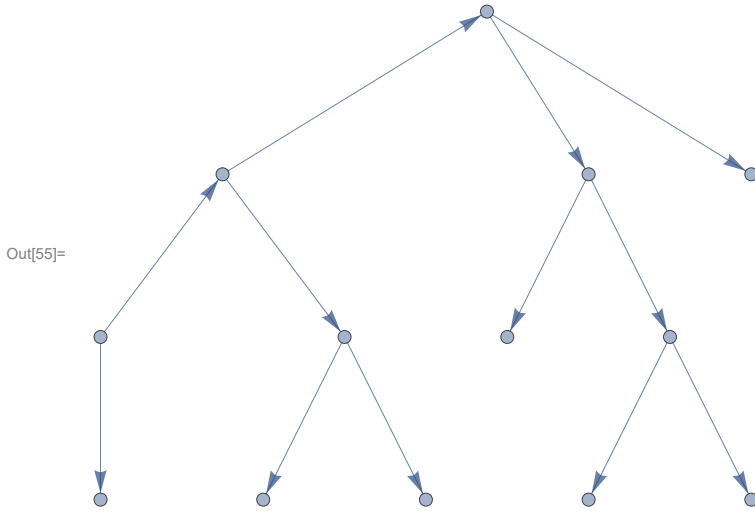
$$\text{Out[45]} = \{x^4 + G^4 x^4 + G^3 (x^3 - 2x^5) + G(x - 3x^3 + x^5) + G^2(-1 + 3x^2 - 2x^4 + x^6)\}$$

$$\text{Out[47]} = \{-x^4 + x^4 y + F^4(-x^4 + x^4 y) + F^3(-x^3 + 2x^5 - xy + x^3 y - 2x^5 y) + \\ F(-x + 3x^3 - x^5 - 3x^3 y + x^5 y) + F^2(1 - 3x^2 + 2x^4 - x^6 + 3x^2 y - 2x^4 y + x^6 y)\}$$



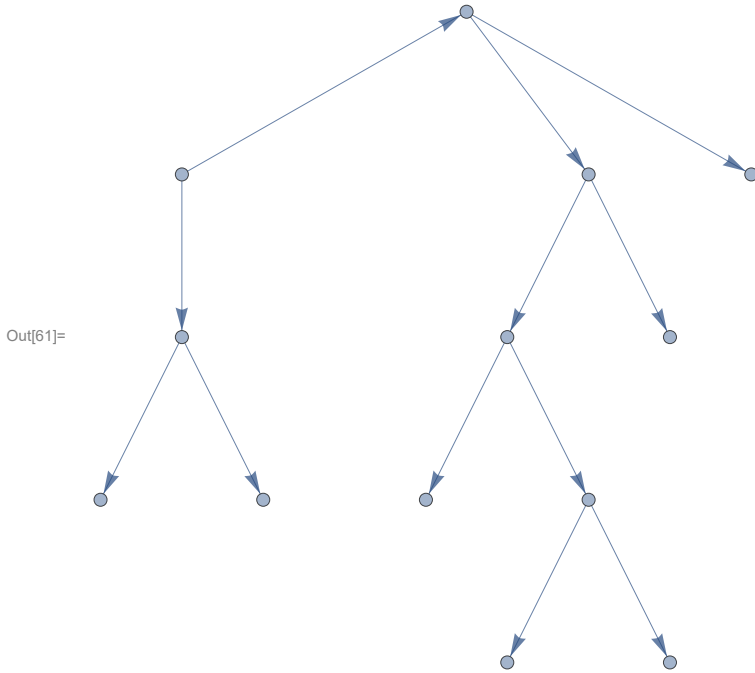
$$\text{Out[51]} = \{x - x^3 + G^3 x^4 + x^5 + G^2(2x^3 - 2x^5) + G(-1 + 2x^2 - 3x^4 + x^6)\}$$

$$\text{Out[53]} = \{-x + x^3 - x^5 - x^3 y + x^5 y + F^3(-x^4 + x^4 y) + \\ F^2(-2x^3 + 2x^5 - xy + 2x^3 y - 2x^5 y) + F(1 - 2x^2 + 3x^4 - x^6 + 2x^2 y - 3x^4 y + x^6 y)\}$$



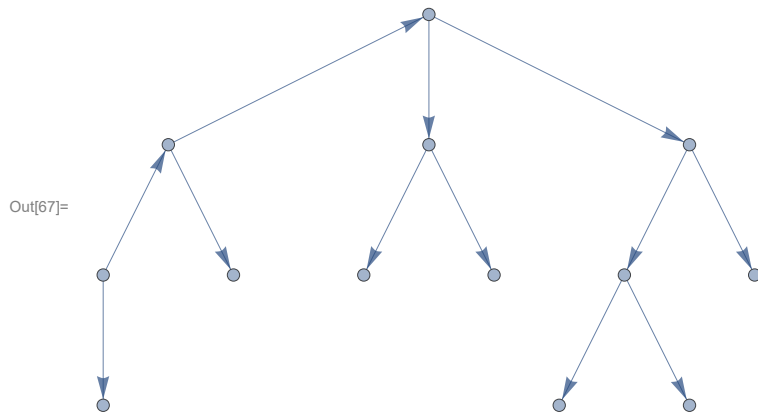
$$\text{Out[57]} = \left\{ -x + x^3 - x^7 + x^9 + G^3 \left( -x^4 - 2x^6 \right) + G^2 \left( -x^3 + 5x^7 \right) + G \left( 1 - 2x^2 + x^4 + 2x^6 - 4x^8 \right) \right\}$$

$$\text{Out[59]} = \left\{ -x + x^3 - x^7 + x^9 - x^3 y + 2x^7 y - 2x^9 y - x^7 y^2 + x^9 y^2 + F^3 \left( -x^4 - 2x^6 + 4x^6 y + x^4 y^2 - 2x^6 y^2 \right) + \right. \\ \left. F^2 \left( -x^3 + 5x^7 - x y + x^3 y + 3x^5 y - 10x^7 y - 3x^5 y^2 + 5x^7 y^2 \right) + \right. \\ \left. F \left( 1 - 2x^2 + x^4 + 2x^6 - 4x^8 + 2x^2 y - x^4 y - 5x^6 y + 8x^8 y + 3x^6 y^2 - 4x^8 y^2 \right) \right\}$$



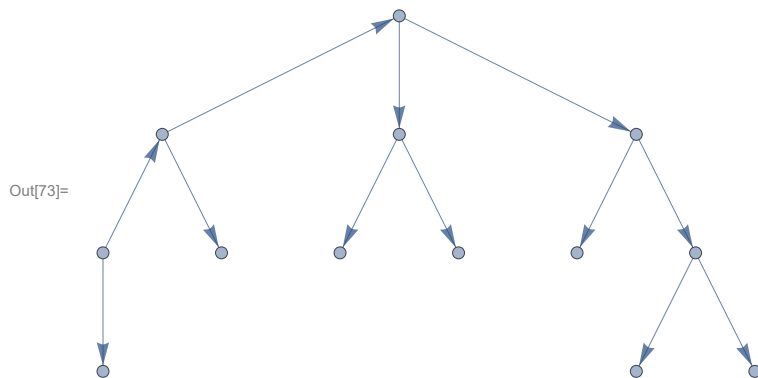
$$\text{Out[63]} = \left\{ -x + x^3 - x^5 + x^7 - x^9 + x^{11} + G^5 x^{12} + x^{15} + G^4 \left( x^7 + 2x^{11} - 4x^{13} \right) + G^3 \left( -x^4 - 5x^8 - 7x^{12} + 6x^{14} \right) + \right. \\ \left. G^2 \left( -2x^3 + 3x^5 - 2x^7 + 8x^9 + 9x^{13} - 4x^{15} \right) + G \left( 1 - 2x^2 + 3x^4 - 3x^6 + 3x^8 - 5x^{10} - 5x^{14} + x^{16} \right) \right\}$$

$$\begin{aligned} \text{Out[65]} = & \left\{ -x + x^3 - x^5 + x^7 - x^9 + x^{11} + x^{15} - x^3 y + x^5 y - 2x^7 y + 3x^9 y - 3x^{11} y - \right. \\ & 4x^{15} y + x^7 y^2 - 3x^9 y^2 + 3x^{11} y^2 + 6x^{15} y^2 + x^9 y^3 - x^{11} y^3 - 4x^{15} y^3 + x^{15} y^4 + \\ & F^5 \left( x^{12} + x^{10} y - 4x^{12} y - 3x^{10} y^2 + 6x^{12} y^2 + 3x^{10} y^3 - 4x^{12} y^3 - x^{10} y^4 + x^{12} y^4 \right) + \\ & F^4 \left( x^7 + 2x^{11} - 4x^{13} - 4x^7 y - 11x^{11} y + 16x^{13} y - x^5 y^2 + 5x^7 y^2 + 21x^{11} y^2 - \right. \\ & \quad \left. 24x^{13} y^2 + x^5 y^3 - 2x^7 y^3 - 17x^{11} y^3 + 16x^{13} y^3 + 5x^{11} y^4 - 4x^{13} y^4 \right) + \\ & F^3 \left( -x^4 - 5x^8 - 7x^{12} + 6x^{14} + 2x^4 y - 3x^6 y + 17x^8 y + 31x^{12} y - 24x^{14} y - x^4 y^2 + 7x^6 y^2 - \right. \\ & \quad \left. 19x^8 y^2 - 51x^{12} y^2 + 36x^{14} y^2 - 4x^6 y^3 + 7x^8 y^3 + 37x^{12} y^3 - 24x^{14} y^3 - 10x^{12} y^4 + 6x^{14} y^4 \right) + \\ & F^2 \left( -2x^3 + 3x^5 - 2x^7 + 8x^9 + 9x^{13} - 4x^{15} - x y + 2x^3 y - 6x^5 y + 10x^7 y - 25x^9 y - \right. \\ & \quad \left. 37x^{13} y + 16x^{15} y + 3x^5 y^2 - 14x^7 y^2 + 26x^9 y^2 + 57x^{13} y^2 - 24x^{15} y^2 + \right. \\ & \quad \left. 6x^7 y^3 - 9x^9 y^3 - 39x^{13} y^3 + 16x^{15} y^3 + 10x^{13} y^4 - 4x^{15} y^4 \right) + \\ & F \left( 1 - 2x^2 + 3x^4 - 3x^6 + 3x^8 - 5x^{10} - 5x^{14} + x^{16} + 2x^2 y - 3x^4 y + 6x^6 y - 10x^8 y + \right. \\ & \quad \left. 15x^{10} y + 20x^{14} y - 4x^{16} y - 3x^6 y^2 + 11x^8 y^2 - 15x^{10} y^2 - 30x^{14} y^2 + \right. \\ & \quad \left. 6x^{16} y^2 - 4x^8 y^3 + 5x^{10} y^3 + 20x^{14} y^3 - 4x^{16} y^3 - 5x^{14} y^4 + x^{16} y^4 \right) \} \end{aligned}$$



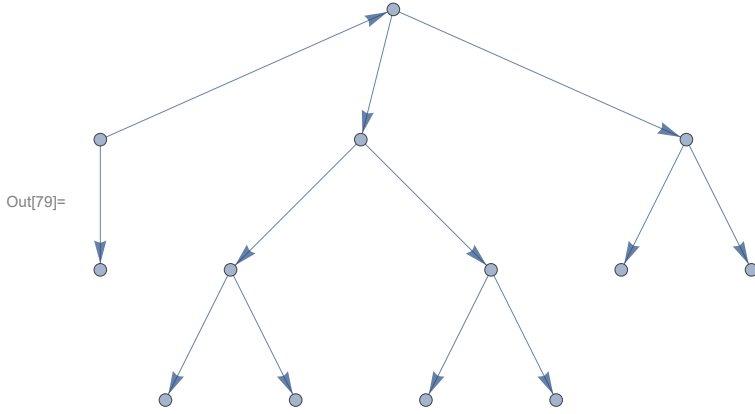
$$\text{Out[69]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[71]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



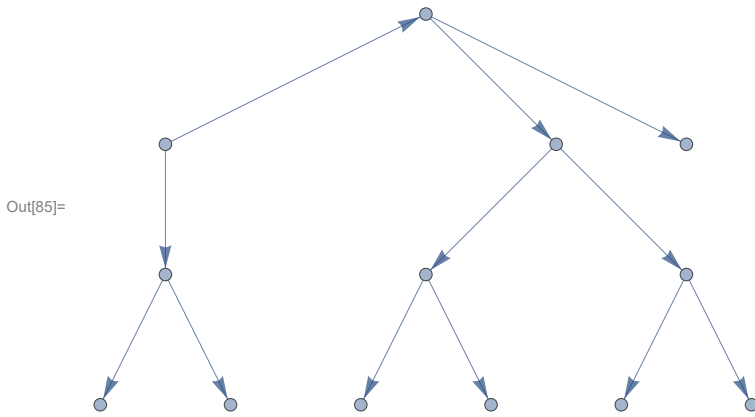
$$\text{Out[75]} = \left\{ x^4 + G^4 x^4 + G^3 \left( x^3 - 2x^5 \right) + G \left( x - 3x^3 + x^5 \right) + G^2 \left( -1 + 3x^2 - 2x^4 + x^6 \right) \right\}$$

$$\text{Out[77]} = \left\{ -x^4 + x^4 y + F^4 \left( -x^4 + x^4 y \right) + F^3 \left( -x^3 + 2x^5 - x y + x^3 y - 2x^5 y \right) + \right. \\ \left. F \left( -x + 3x^3 - x^5 - 3x^3 y + x^5 y \right) + F^2 \left( 1 - 3x^2 + 2x^4 - x^6 + 3x^2 y - 2x^4 y + x^6 y \right) \right\}$$



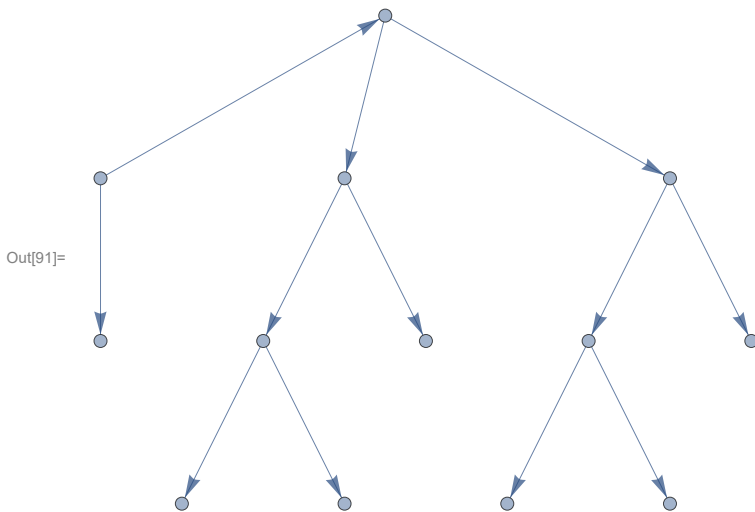
$$\text{Out[81]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 (2 x^3 - 2 x^5) + G (-1 + 2 x^2 - 3 x^4 + x^6) \right\}$$

$$\text{Out[83]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 (-x^4 + x^4 y) + F^2 (-2 x^3 + 2 x^5 - x y + 2 x^3 y - 2 x^5 y) + F (1 - 2 x^2 + 3 x^4 - x^6 + 2 x^2 y - 3 x^4 y + x^6 y) \right\}$$



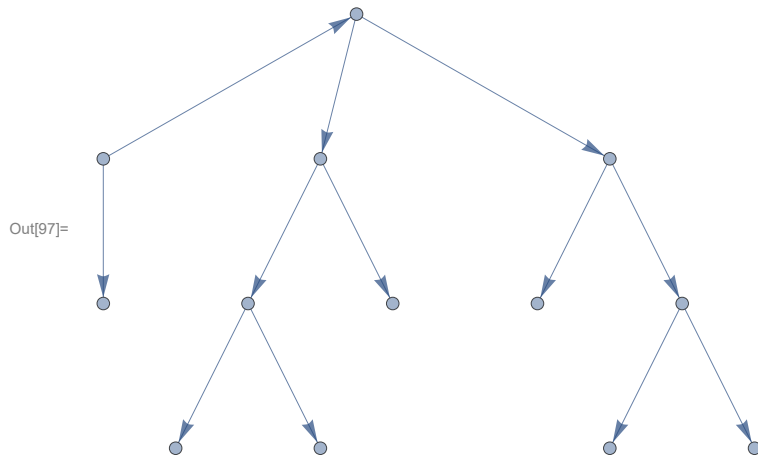
$$\text{Out[87]} = \left\{ -x + x^3 - x^7 + x^9 + G^3 (-x^4 - 2 x^6) + G^2 (-x^3 + 5 x^7) + G (1 - 2 x^2 + x^4 + 2 x^6 - 4 x^8) \right\}$$

$$\text{Out[89]} = \left\{ -x + x^3 - x^7 + x^9 - x^3 y + 2 x^7 y - 2 x^9 y - x^7 y^2 + x^9 y^2 + F^3 (-x^4 - 2 x^6 + 4 x^6 y + x^4 y^2 - 2 x^6 y^2) + F^2 (-x^3 + 5 x^7 - x y + x^3 y + 3 x^5 y - 10 x^7 y - 3 x^5 y^2 + 5 x^7 y^2) + F (1 - 2 x^2 + x^4 + 2 x^6 - 4 x^8 + 2 x^2 y - x^4 y - 5 x^6 y + 8 x^8 y + 3 x^6 y^2 - 4 x^8 y^2) \right\}$$



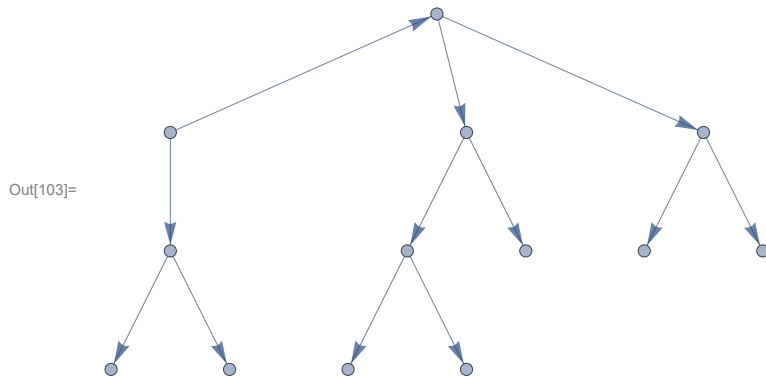
$$\text{Out[93]} = \left\{ -x + x^3 + G (1 - 2 x^2 + 2 x^4) + G^2 (-2 x^3 + 2 x^5) + G^3 (-x^4 + x^6) \right\}$$

$$\text{Out[95]} = \left\{ x - x^3 + x^3 y + F(-1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y) + \right. \\ \left. F^2(2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y) + F^3(x^4 - x^6 - x^4 y + x^6 y) \right\}$$



$$\text{Out[99]} = \left\{ x^4 + G^4 x^4 + G^3(x^3 - 2x^5) + G(x - 3x^3 + x^5) + G^2(-1 + 3x^2 - 2x^4 + x^6) \right\}$$

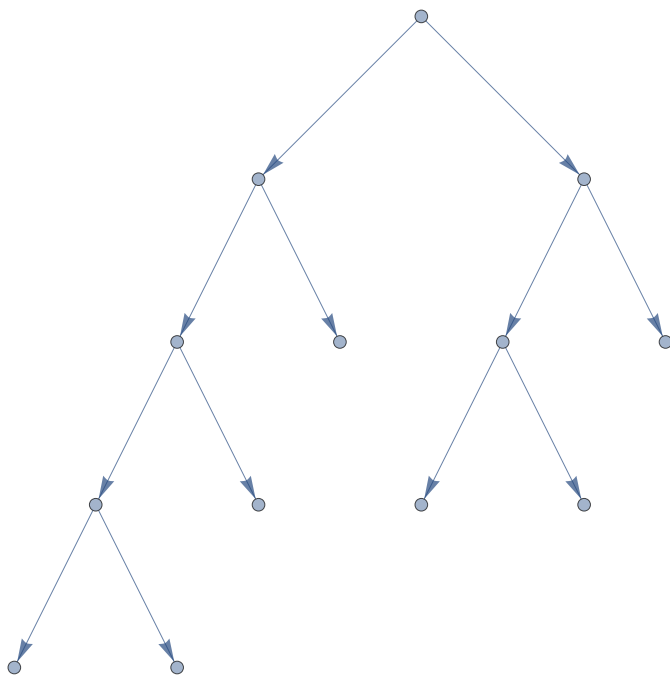
$$\text{Out[101]} = \left\{ -x^4 + x^4 y + F^4(-x^4 + x^4 y) + F^3(-x^3 + 2x^5 - xy + x^3 y - 2x^5 y) + \right. \\ \left. F(-x + 3x^3 - x^5 - 3x^3 y + x^5 y) + F^2(1 - 3x^2 + 2x^4 - x^6 + 3x^2 y - 2x^4 y + x^6 y) \right\}$$



$$\text{Out[105]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2(2x^3 - 2x^5) + G(-1 + 2x^2 - 3x^4 + x^6) \right\}$$

$$\text{Out[107]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3(-x^4 + x^4 y) + \right. \\ \left. F^2(-2x^3 + 2x^5 - xy + 2x^3 y - 2x^5 y) + F(1 - 2x^2 + 3x^4 - x^6 + 2x^2 y - 3x^4 y + x^6 y) \right\}$$

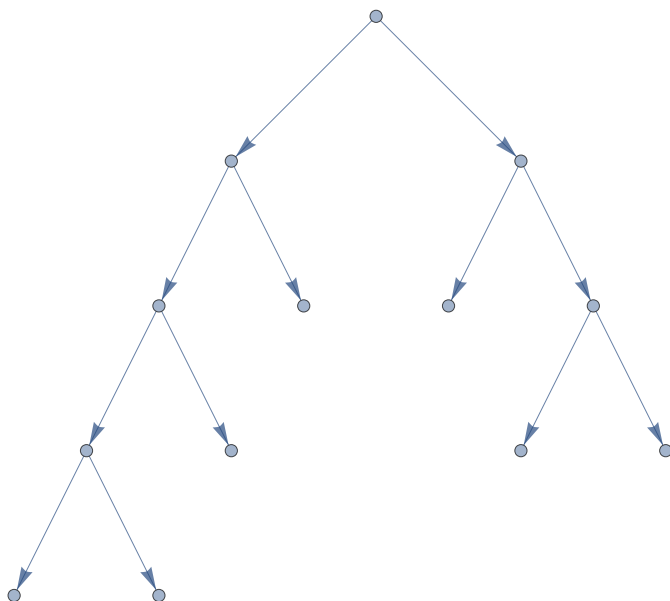
Out[109]=



$$\text{Out[111]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

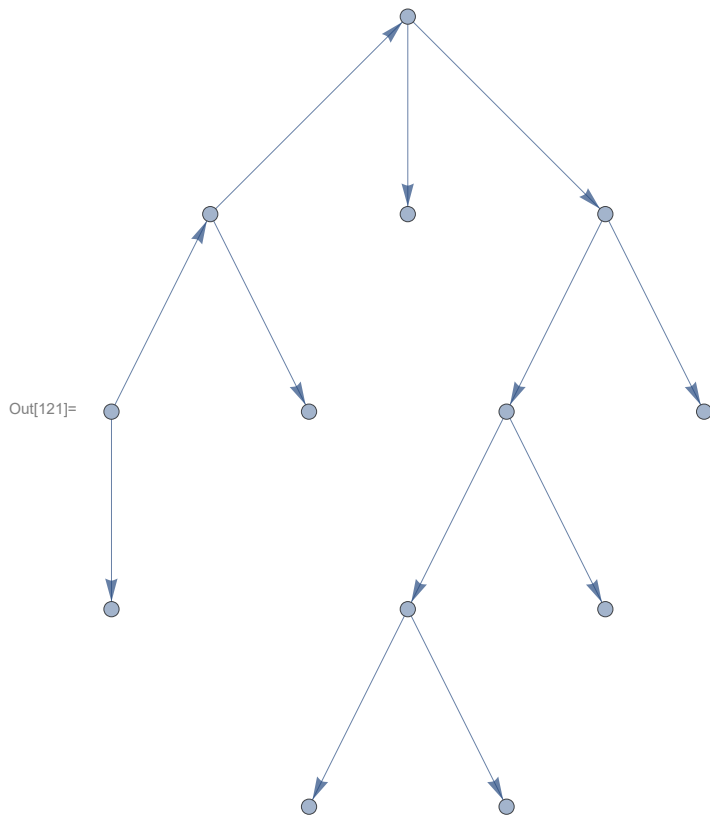
$$\text{Out[113]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$

Out[115]=



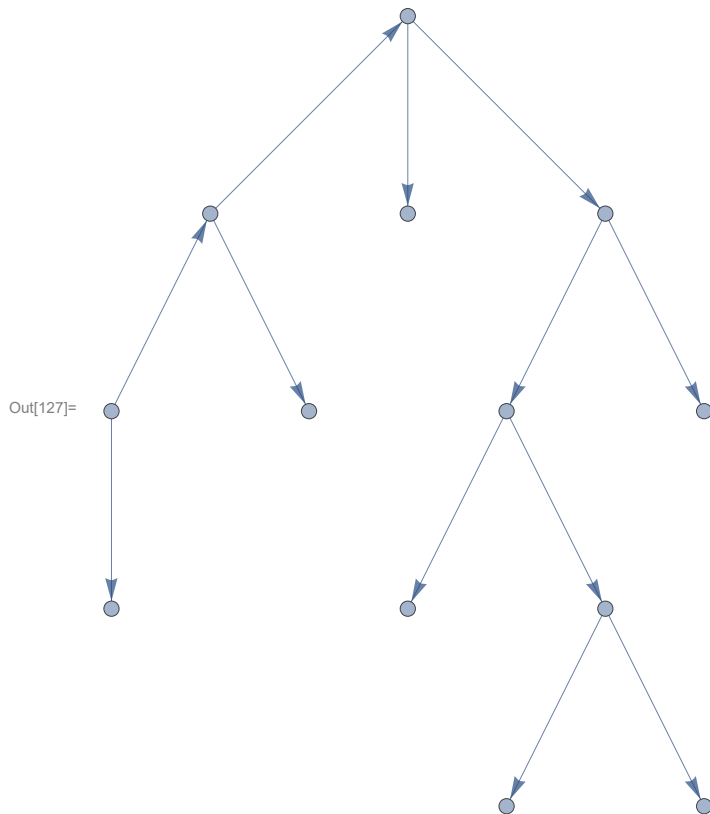
$$\text{Out[117]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[119]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



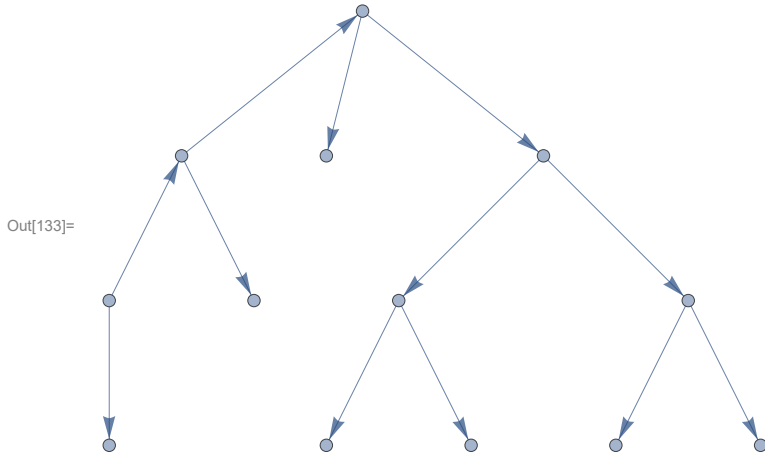
$$\text{Out[123]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[125]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



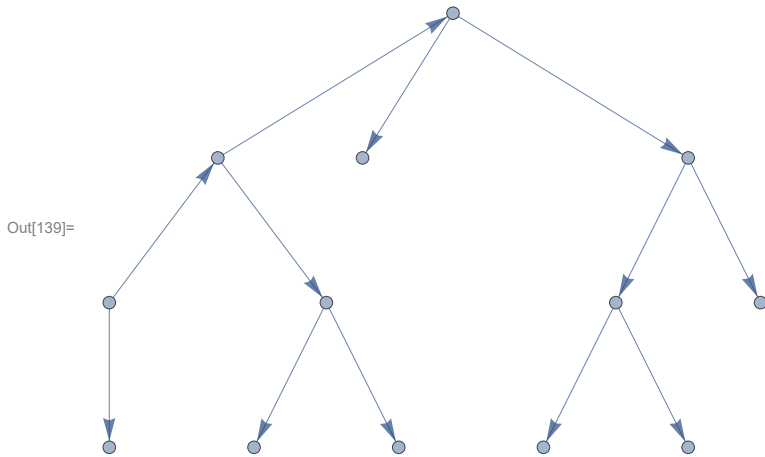
$$\text{Out[129]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[131]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[135]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[137]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$

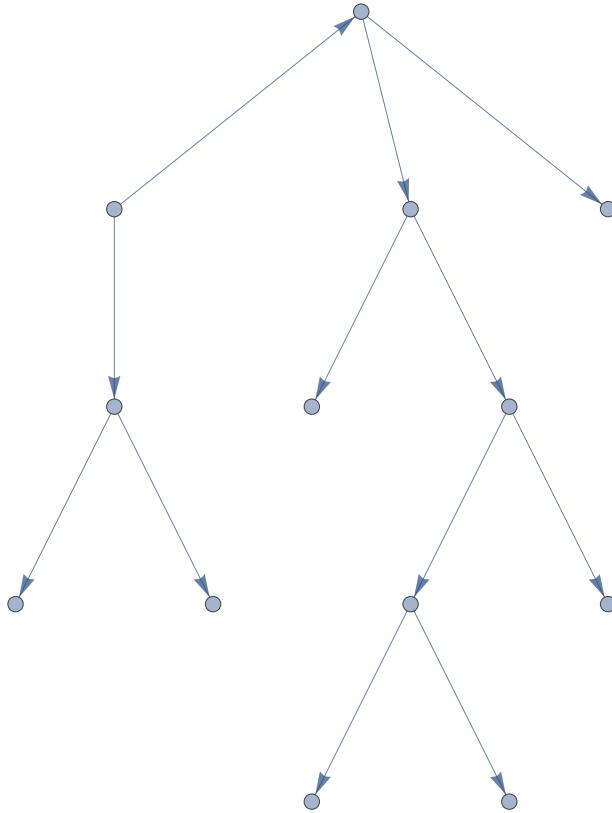


$$\text{Out[141]} = \left\{ x - x^3 + x^5 + G^2(3x^3 - 2x^5) + G(-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[143]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2(-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F(1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

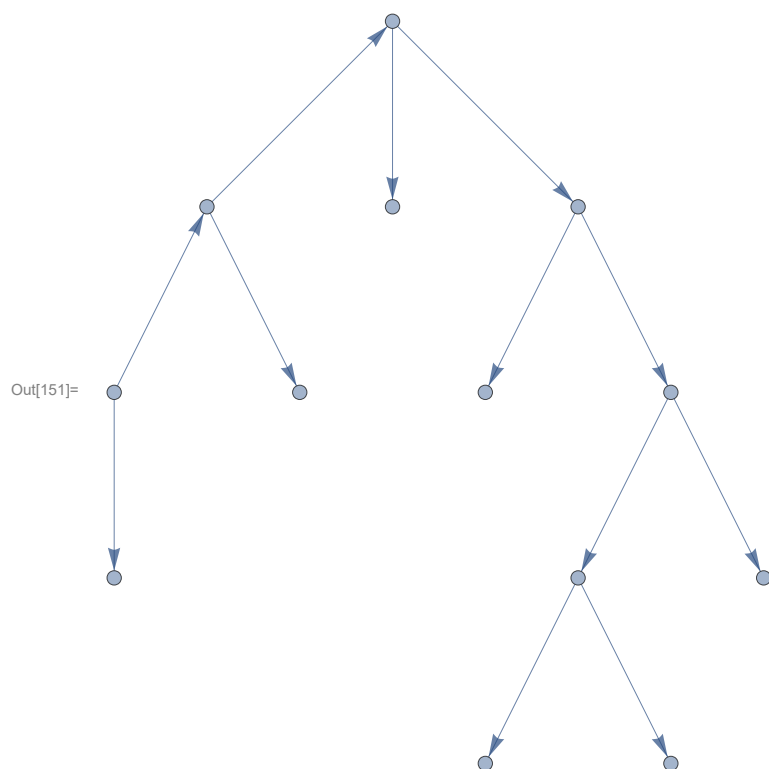


Out[145]=



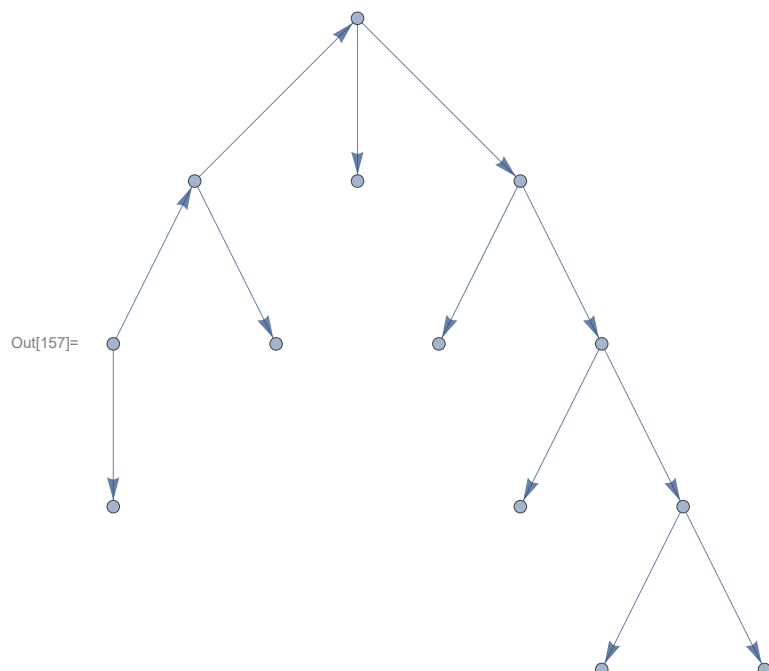
$$\text{Out[147]} = \left\{ x - x^3 + x^7 + G \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 \right) + G^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 \right) + G^3 \left( 2x^6 - 3x^8 + x^{10} \right) \right\}$$

$$\begin{aligned} \text{Out[149]} = & \left\{ x - x^3 + x^7 + x^3 y - 2x^7 y + x^7 y^2 + \right. \\ & F \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 - 2x^2 y + 2x^4 y + 6x^6 y - 6x^8 y - 3x^6 y^2 + 3x^8 y^2 \right) + \\ & F^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 + x y - 2x^3 y - 4x^5 y + 12x^7 y - 6x^9 y + 3x^5 y^2 - 6x^7 y^2 + 3x^9 y^2 \right) + \\ & \left. F^3 \left( 2x^6 - 3x^8 + x^{10} + x^4 y - 5x^6 y + 6x^8 y - 2x^{10} y - x^4 y^2 + 3x^6 y^2 - 3x^8 y^2 + x^{10} y^2 \right) \right\} \end{aligned}$$



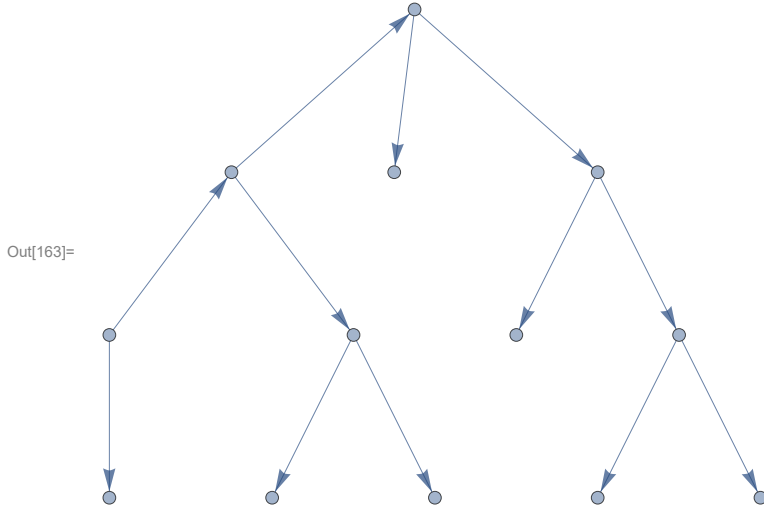
$$\text{Out[153]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G (x - 3x^3 + 2x^5) + G^2 (-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[155]} = \left\{ -x^4 + x^4 y + F^3 (-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F (-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2 (1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



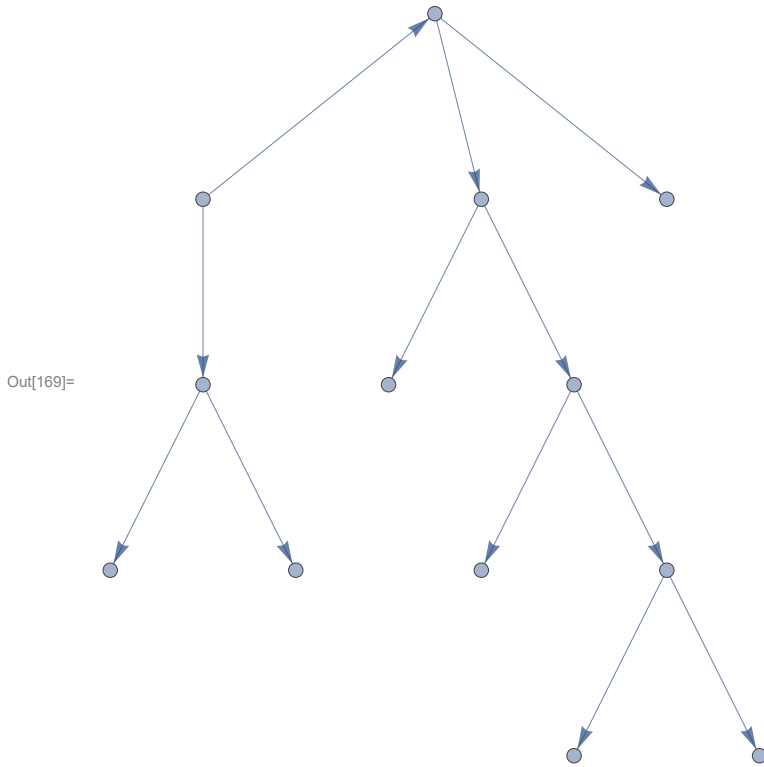
$$\text{Out[159]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

$$\text{Out[161]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + xy - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + \right. \\ \left. F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$



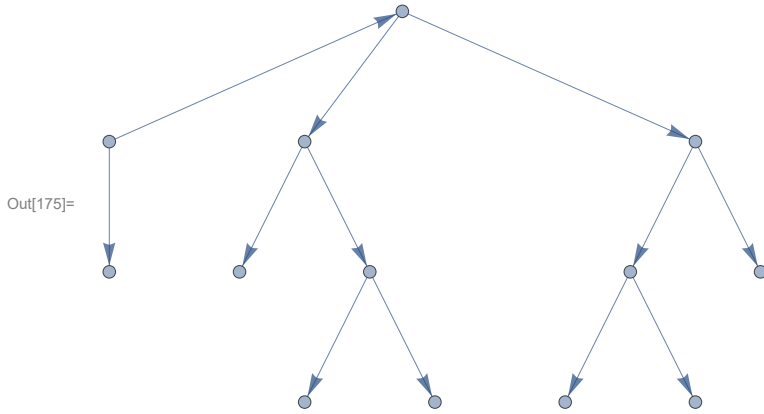
$$\text{Out[165]} = \left\{ -2 G^3 x^3 - x^4 + x^6 + G^2 (1 - 3 x^2 + 5 x^4) + G (-x + 3 x^3 - 4 x^5) \right\}$$

$$\text{Out[167]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2 x^3 + x y - 2 x^3 y) + \right. \\ \left. F^2 (-1 + 3 x^2 - 5 x^4 - 3 x^2 y + 5 x^4 y) + F (x - 3 x^3 + 4 x^5 + 3 x^3 y - 4 x^5 y) \right\}$$



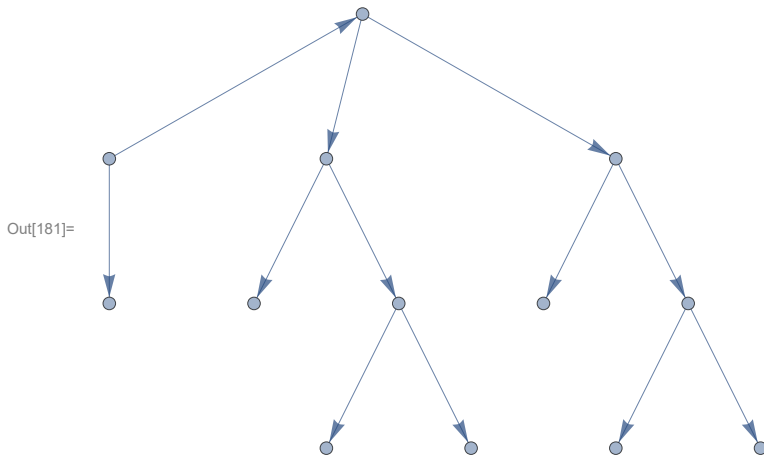
$$\text{Out[171]} = \left\{ x - x^3 + x^7 + G (-1 + 2 x^2 - 2 x^4 - 3 x^6 + 3 x^8) + G^2 (2 x^3 + x^5 - 6 x^7 + 3 x^9) + G^3 (2 x^6 - 3 x^8 + x^{10}) \right\}$$

$$\text{Out[173]} = \left\{ x - x^3 + x^7 + x^3 y - 2 x^7 y + x^7 y^2 + \right. \\ \left. F (-1 + 2 x^2 - 2 x^4 - 3 x^6 + 3 x^8 - 2 x^2 y + 2 x^4 y + 6 x^6 y - 6 x^8 y - 3 x^6 y^2 + 3 x^8 y^2) + \right. \\ \left. F^2 (2 x^3 + x^5 - 6 x^7 + 3 x^9 + x y - 2 x^3 y - 4 x^5 y + 12 x^7 y - 6 x^9 y + 3 x^5 y^2 - 6 x^7 y^2 + 3 x^9 y^2) + \right. \\ \left. F^3 (2 x^6 - 3 x^8 + x^{10} + x^4 y - 5 x^6 y + 6 x^8 y - 2 x^{10} y - x^4 y^2 + 3 x^6 y^2 - 3 x^8 y^2 + x^{10} y^2) \right\}$$



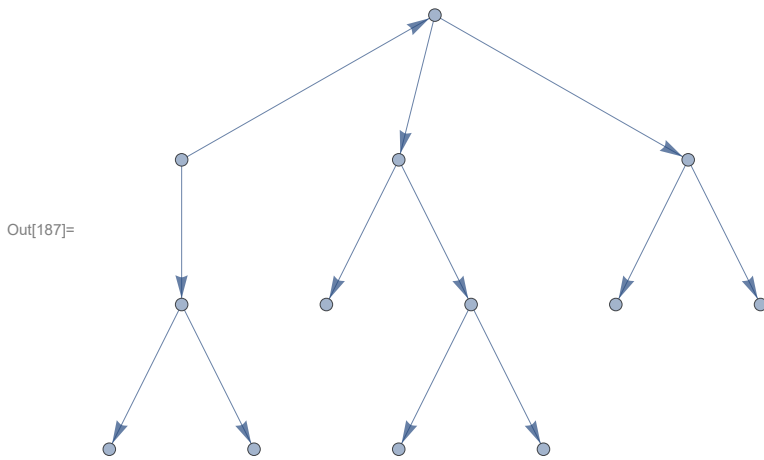
$$\text{Out[177]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[179]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[183]} = \left\{ -2G^3 x^3 - x^4 + x^6 + G^2 (1 - 3x^2 + 5x^4) + G (-x + 3x^3 - 4x^5) \right\}$$

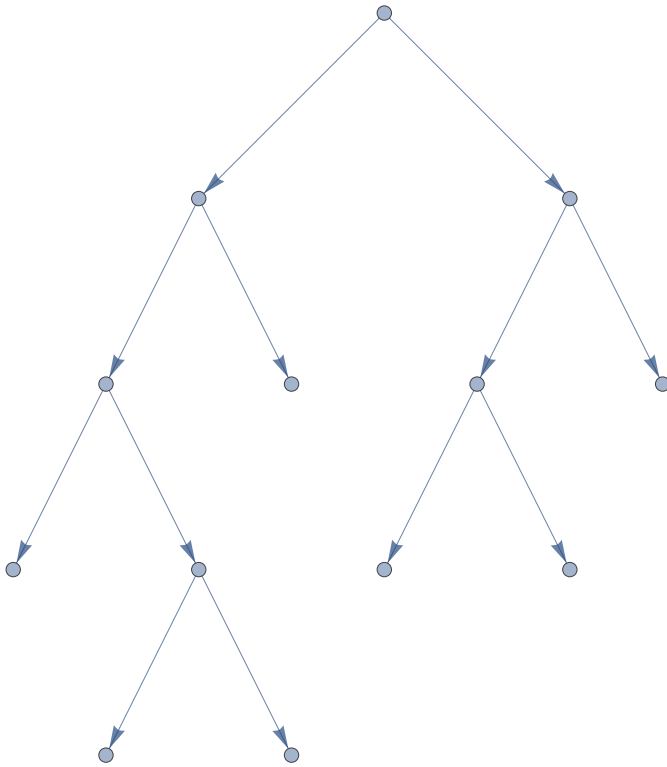
$$\text{Out[185]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2x^3 + xy - 2x^3 y) + \right. \\ \left. F^2 (-1 + 3x^2 - 5x^4 - 3x^2 y + 5x^4 y) + F (x - 3x^3 + 4x^5 + 3x^3 y - 4x^5 y) \right\}$$



$$\text{Out[189]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 (2x^3 - 2x^5) + G (-1 + 2x^2 - 3x^4 + x^6) \right\}$$

$$\text{Out[191]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 \left( -x^4 + x^4 y \right) + \right. \\ \left. F^2 \left( -2 x^3 + 2 x^5 - x y + 2 x^3 y - 2 x^5 y \right) + F \left( 1 - 2 x^2 + 3 x^4 - x^6 + 2 x^2 y - 3 x^4 y + x^6 y \right) \right\}$$

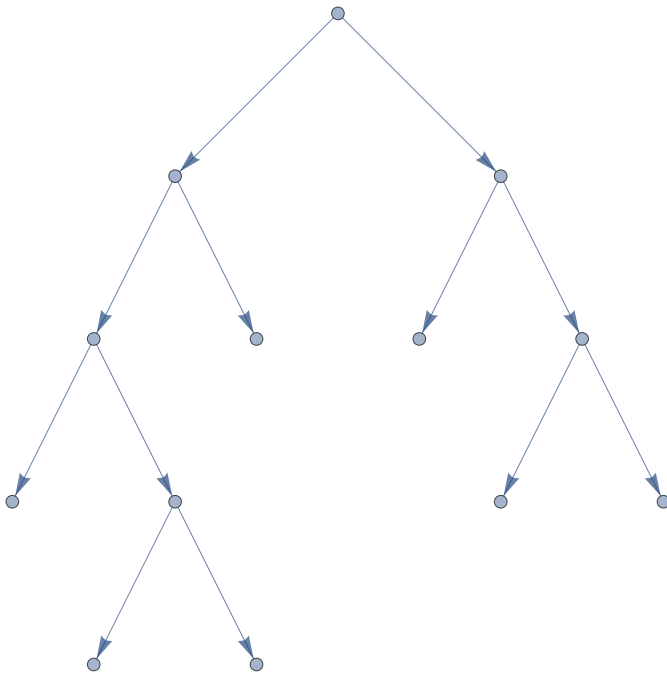
Out[193]=



$$\text{Out[195]} = \left\{ x - x^3 + x^7 + G \left( -1 + 2 x^2 - 2 x^4 - 3 x^6 + 3 x^8 \right) + G^2 \left( 2 x^3 + x^5 - 6 x^7 + 3 x^9 \right) + G^3 \left( 2 x^6 - 3 x^8 + x^{10} \right) \right\}$$

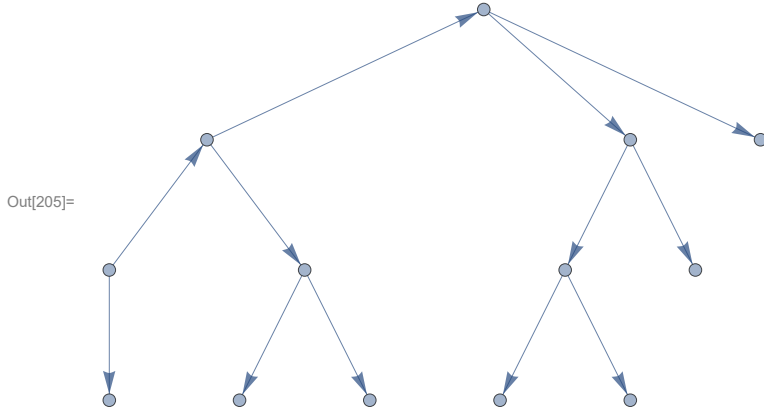
$$\text{Out[197]} = \left\{ x - x^3 + x^7 + x^3 y - 2 x^7 y + x^7 y^2 + \right. \\ F \left( -1 + 2 x^2 - 2 x^4 - 3 x^6 + 3 x^8 - 2 x^2 y + 2 x^4 y + 6 x^6 y - 6 x^8 y - 3 x^6 y^2 + 3 x^8 y^2 \right) + \\ F^2 \left( 2 x^3 + x^5 - 6 x^7 + 3 x^9 + x y - 2 x^3 y - 4 x^5 y + 12 x^7 y - 6 x^9 y + 3 x^5 y^2 - 6 x^7 y^2 + 3 x^9 y^2 \right) + \\ \left. F^3 \left( 2 x^6 - 3 x^8 + x^{10} + x^4 y - 5 x^6 y + 6 x^8 y - 2 x^{10} y - x^4 y^2 + 3 x^6 y^2 - 3 x^8 y^2 + x^{10} y^2 \right) \right\}$$

Out[199]=



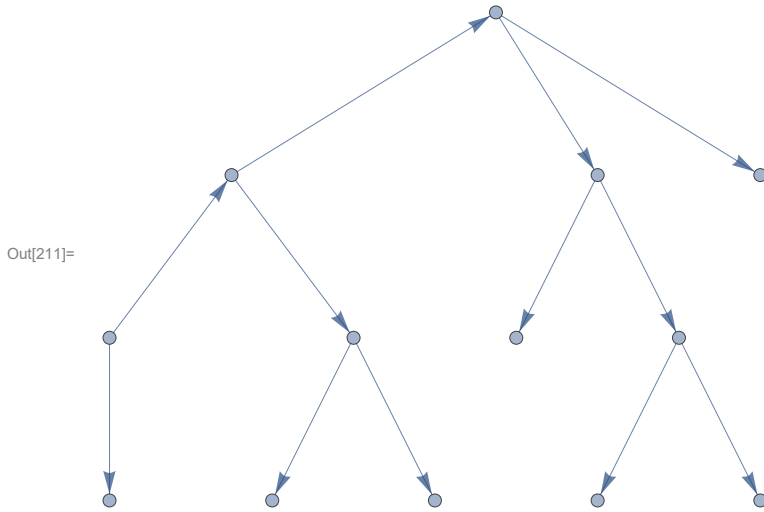
$$\text{Out[201]} = \left\{ x - x^3 + x^7 + G \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 \right) + G^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 \right) + G^3 \left( 2x^6 - 3x^8 + x^{10} \right) \right\}$$

$$\begin{aligned} \text{Out[203]} = & \left\{ x - x^3 + x^7 + x^3 y - 2x^7 y + x^7 y^2 + \right. \\ & F \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 - 2x^2 y + 2x^4 y + 6x^6 y - 6x^8 y - 3x^6 y^2 + 3x^8 y^2 \right) + \\ & F^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 + x y - 2x^3 y - 4x^5 y + 12x^7 y - 6x^9 y + 3x^5 y^2 - 6x^7 y^2 + 3x^9 y^2 \right) + \\ & \left. F^3 \left( 2x^6 - 3x^8 + x^{10} + x^4 y - 5x^6 y + 6x^8 y - 2x^{10} y - x^4 y^2 + 3x^6 y^2 - 3x^8 y^2 + x^{10} y^2 \right) \right\} \end{aligned}$$



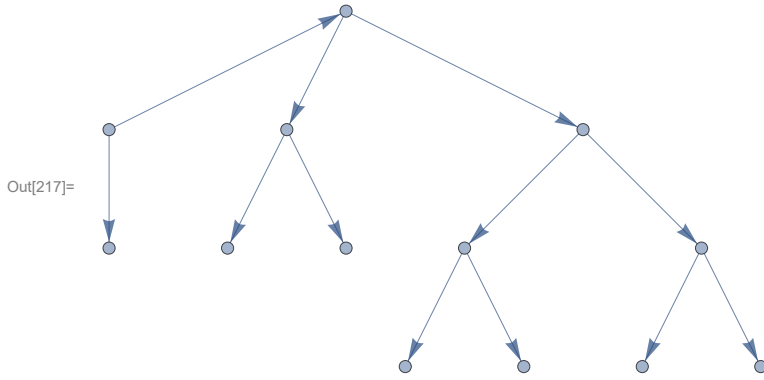
$$\text{Out[207]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\begin{aligned} \text{Out[209]} = & \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ & F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \left. \right\} \end{aligned}$$



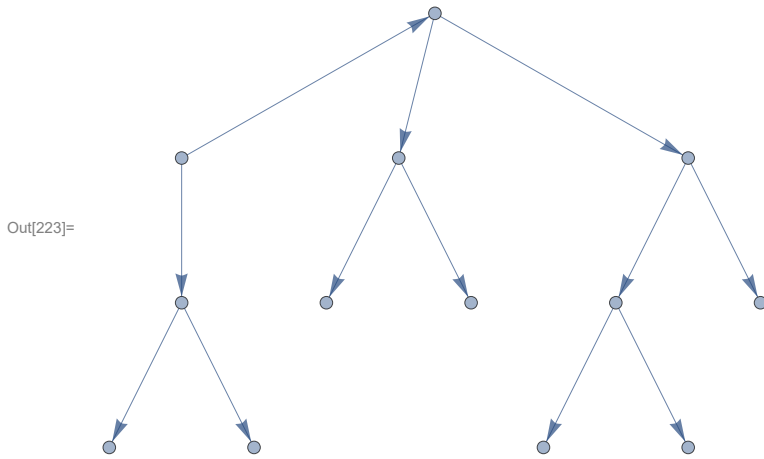
$$\text{Out[213]} = \left\{ x - x^3 + x^5 + G^2 \left( 3x^3 - 2x^5 \right) + G \left( -1 + 2x^2 - 4x^4 + x^6 \right) \right\}$$

$$\begin{aligned} \text{Out[215]} = & \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ & F^2 \left( -3x^3 + 2x^5 - x y + 3x^3 y - 2x^5 y \right) + F \left( 1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y \right) \left. \right\} \end{aligned}$$



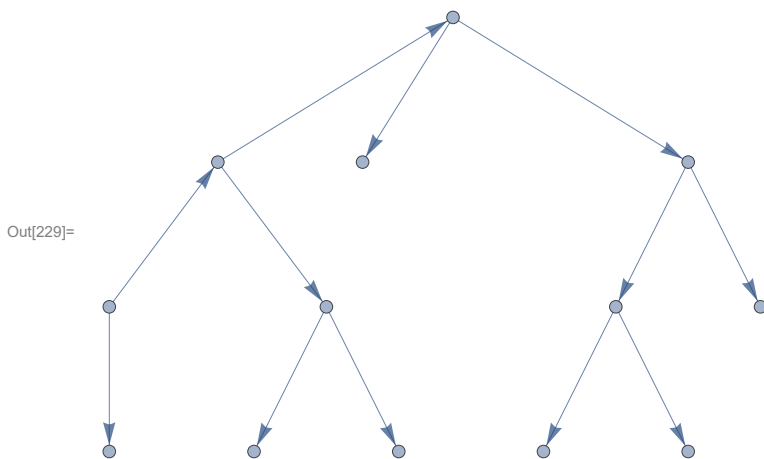
$$\text{Out[219]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[221]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[225]} = \left\{ x - x^3 + x^5 + G^2(3x^3 - 2x^5) + G(-1 + 2x^2 - 4x^4 + x^6) \right\}$$

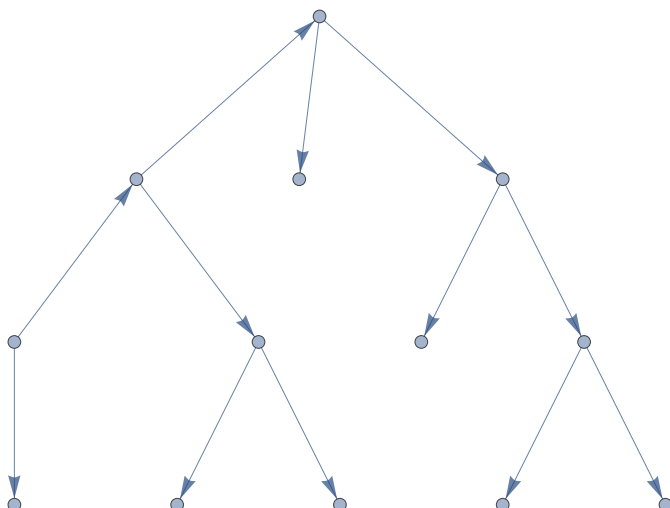
$$\text{Out[227]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2(-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F(1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[231]} = \left\{ x^4 + G^3(2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[233]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$

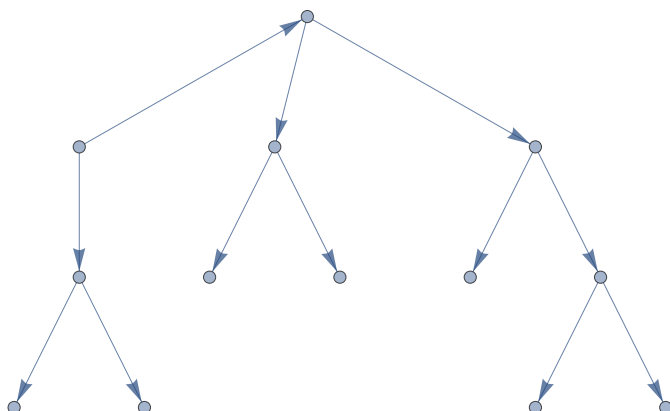
Out[235]=



$$\text{Out[237]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

$$\text{Out[239]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$

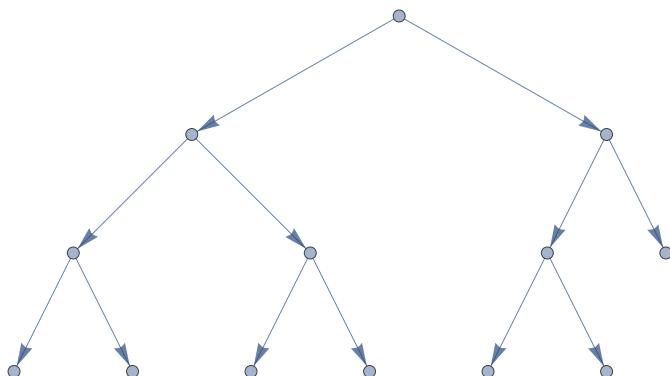
Out[241]=



$$\text{Out[243]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[245]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2 (-3x^3 + 2x^5 - x y + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

Out[247]=

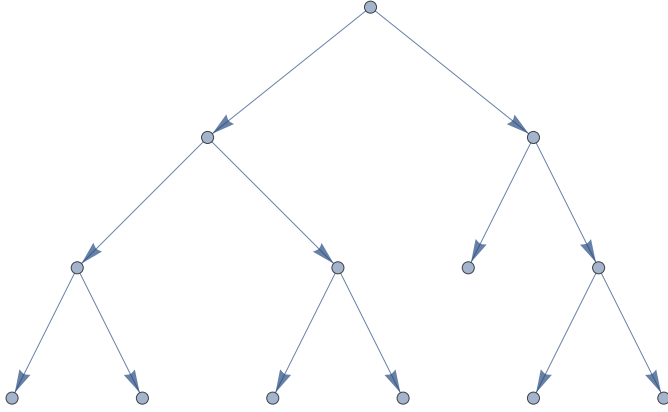


$$\text{Out[249]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[251]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2 (-3x^3 + 2x^5 - x y + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



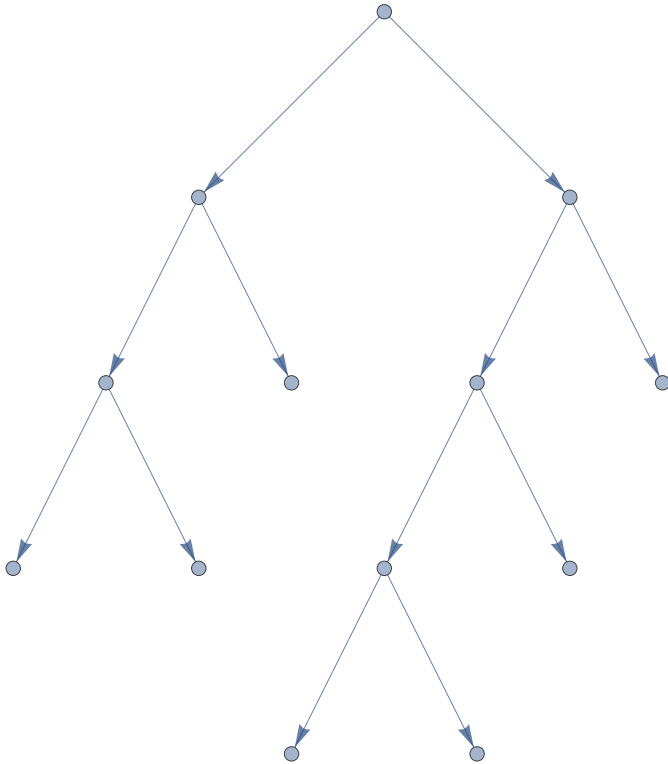
Out[253]=



$$\text{Out[255]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[257]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

Out[259]=



$$\text{Out[261]} = \left\{ -x + x^3 + G (1 - 2x^2 + 2x^4) + G^2 (-2x^3 + 2x^5) + G^3 (-x^4 + x^6) \right\}$$

$$\text{Out[263]} = \left\{ x - x^3 + x^3 y + F (-1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y) + F^2 (2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y) + F^3 (x^4 - x^6 - x^4 y + x^6 y) \right\}$$

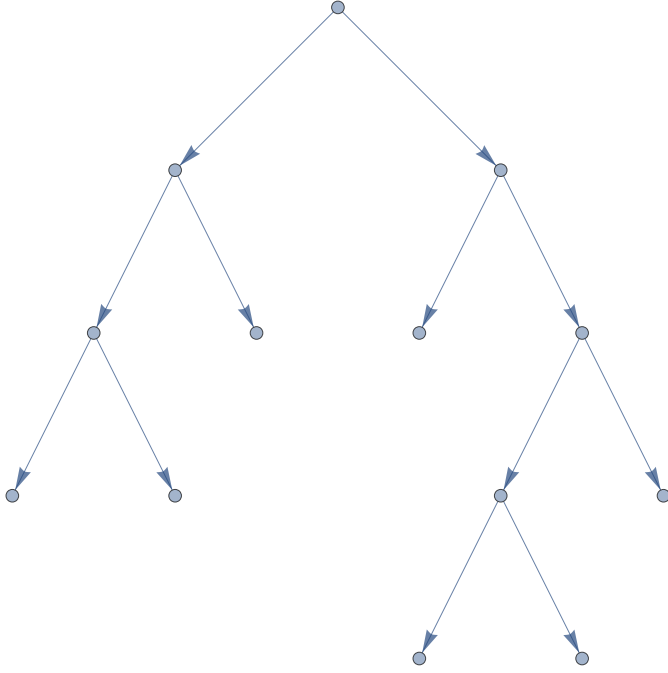


$$\text{Out[269]} = \left\{ x - x^3 + x^5 + x^3 y - x^5 y + F \left( -1 + 2 x^2 - 4 x^4 - 2 x^2 y + 4 x^4 y \right) + F^2 \left( 3 x^3 - x^5 + x y - 3 x^3 y + x^5 y \right) + F^3 \left( -x^6 + x^6 y \right) \right\}$$



$$\text{Out}[275] = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 \left( -3 x^3 + 2 x^5 - x y + 3 x^3 y - 2 x^5 y \right) + F \left( 1 - 2 x^2 + 4 x^4 - x^6 + 2 x^2 y - 4 x^4 y + x^6 y \right) \right\}$$

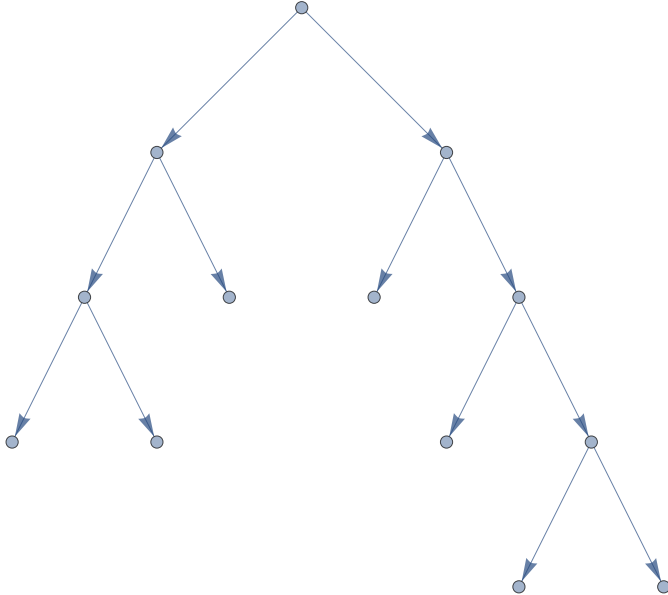
Out[277]=



$$\text{Out[279]} = \left\{ x - x^3 + x^7 + G \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 \right) + G^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 \right) + G^3 \left( 2x^6 - 3x^8 + x^{10} \right) \right\}$$

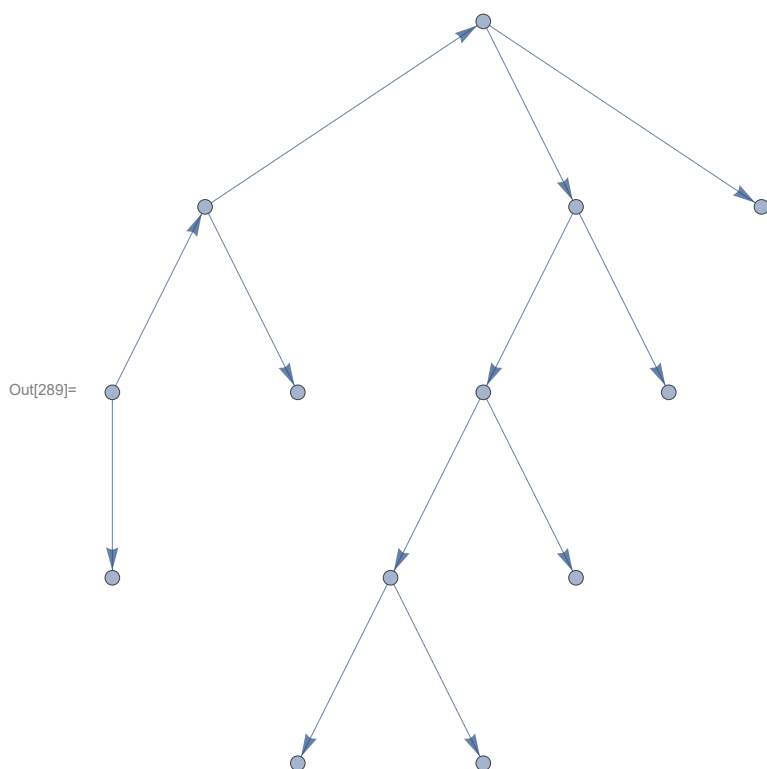
$$\begin{aligned} \text{Out[281]} = & \left\{ x - x^3 + x^7 + x^3 y - 2x^7 y + x^7 y^2 + \right. \\ & F \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 - 2x^2 y + 2x^4 y + 6x^6 y - 6x^8 y - 3x^6 y^2 + 3x^8 y^2 \right) + \\ & F^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 + x y - 2x^3 y - 4x^5 y + 12x^7 y - 6x^9 y + 3x^5 y^2 - 6x^7 y^2 + 3x^9 y^2 \right) + \\ & \left. F^3 \left( 2x^6 - 3x^8 + x^{10} + x^4 y - 5x^6 y + 6x^8 y - 2x^{10} y - x^4 y^2 + 3x^6 y^2 - 3x^8 y^2 + x^{10} y^2 \right) \right\} \end{aligned}$$

Out[283]=



$$\text{Out[285]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

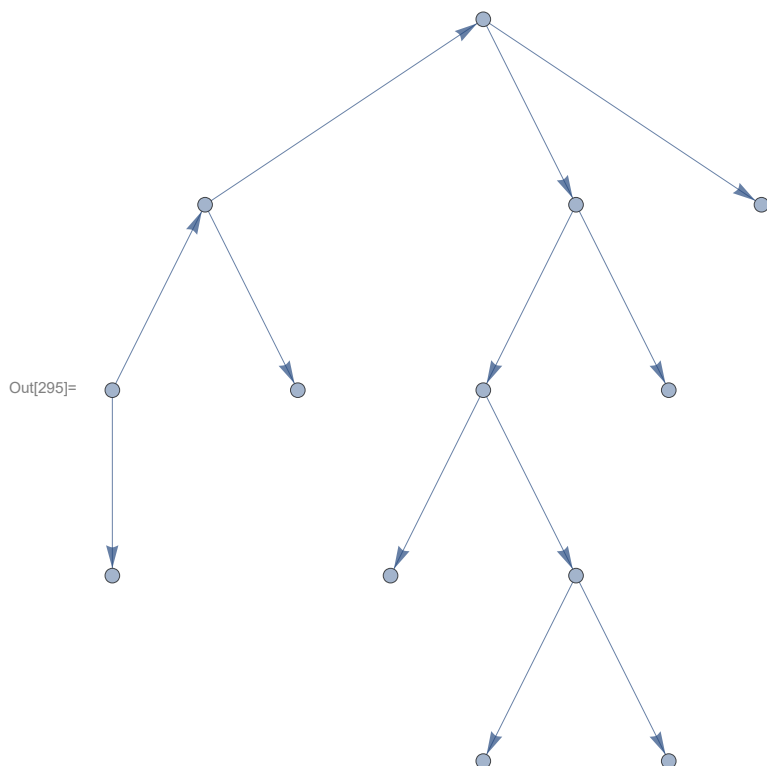
$$\begin{aligned} \text{Out[287]} = & \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ & F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \left. \right\} \end{aligned}$$



Out[289]=

$$\text{Out[291]} = \left\{ -x^2 + x^4 + G \left( 2x - 3x^3 + 3x^5 \right) + G^2 \left( -1 + 2x^2 - 6x^4 + 3x^6 \right) + G^3 \left( 3x^3 - 3x^5 + x^7 \right) \right\}$$

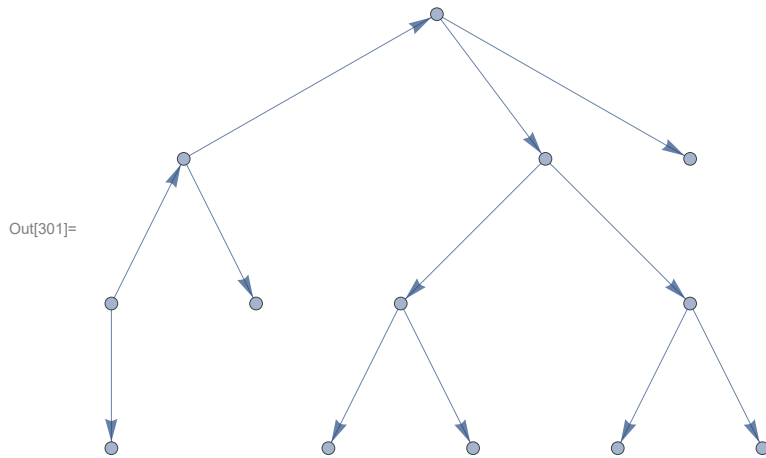
$$\text{Out[293]} = \left\{ x^2 - x^4 + x^4 y + F \left( -2x + 3x^3 - 3x^5 - 3x^3 y + 3x^5 y \right) + \right. \\ \left. F^2 \left( 1 - 2x^2 + 6x^4 - 3x^6 + 3x^2 y - 6x^4 y + 3x^6 y \right) + F^3 \left( -3x^3 + 3x^5 - x^7 - x y + 3x^3 y - 3x^5 y + x^7 y \right) \right\}$$



Out[295]=

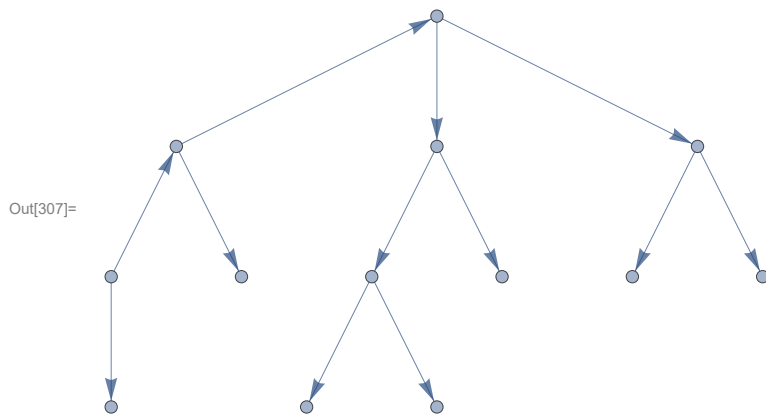
$$\text{Out[297]} = \left\{ x - x^3 + x^5 + G^2 \left( 3x^3 - 2x^5 \right) + G \left( -1 + 2x^2 - 4x^4 + x^6 \right) \right\}$$

$$\text{Out[299]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[303]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

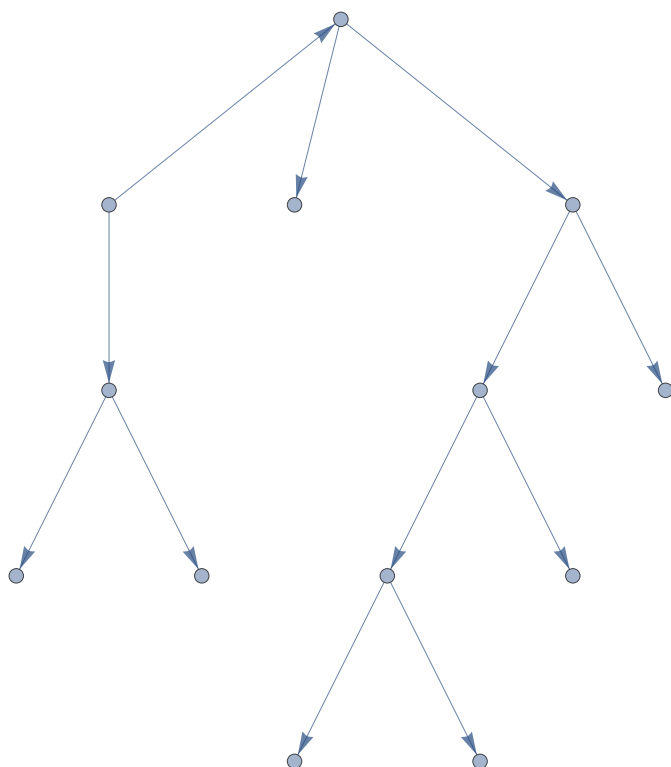
$$\text{Out[305]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[309]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G (x - 3x^3 + 2x^5) + G^2 (-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[311]} = \left\{ -x^4 + x^4 y + F^3 (-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F (-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2 (1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$

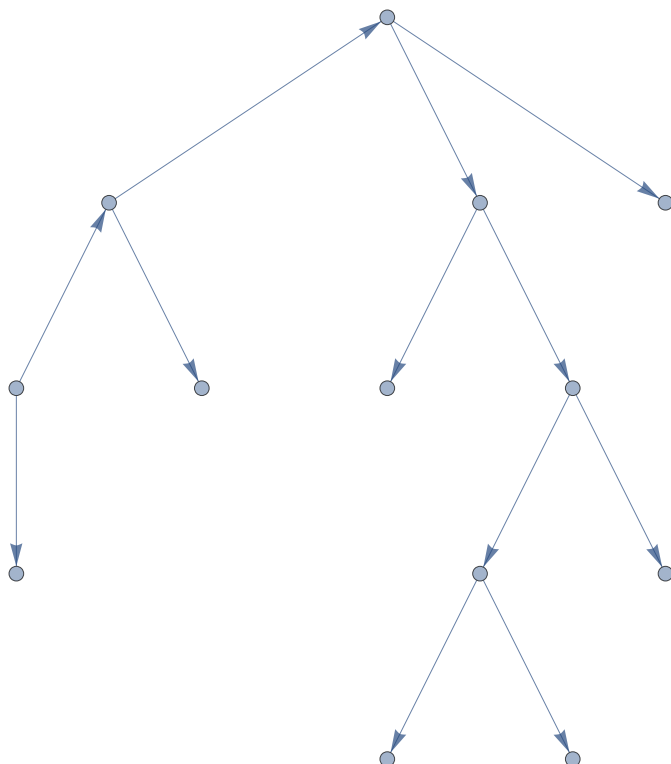
Out[313]=



$$\text{Out[315]} = \left\{ -x + x^3 - x^5 + G^3 x^6 + G \left( 1 - 2x^2 + 4x^4 \right) + G^2 \left( -3x^3 + x^5 \right) \right\}$$

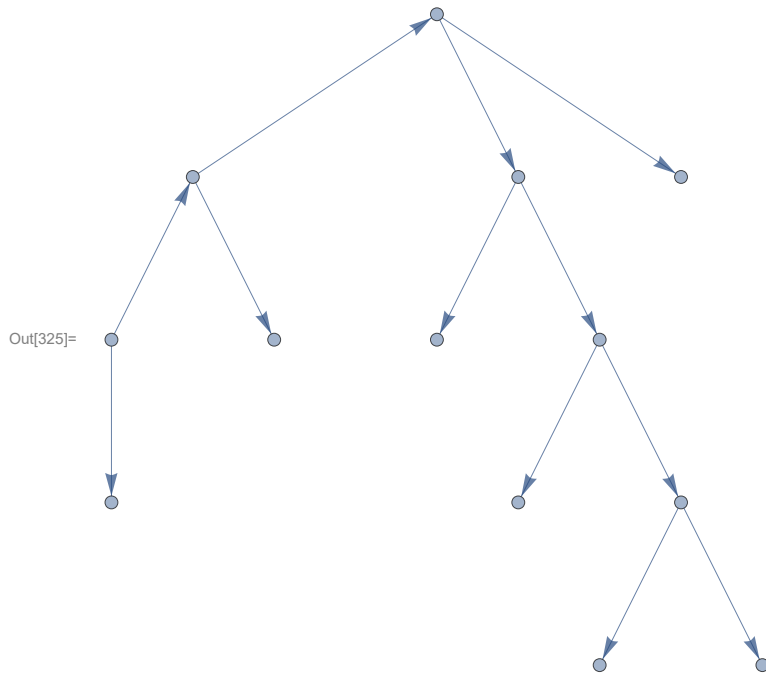
$$\text{Out[317]} = \left\{ x - x^3 + x^5 + x^3 y - x^5 y + F \left( -1 + 2x^2 - 4x^4 - 2x^2 y + 4x^4 y \right) + F^2 \left( 3x^3 - x^5 + xy - 3x^3 y + x^5 y \right) + F^3 \left( -x^6 + x^6 y \right) \right\}$$

Out[319]=



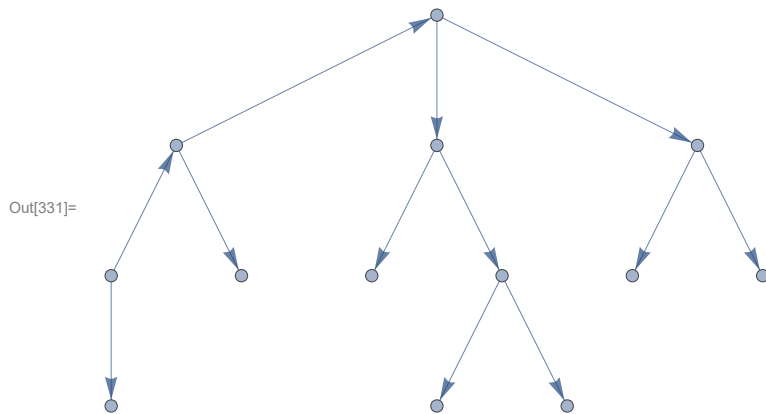
$$\text{Out[321]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 \left( 2x^3 - 2x^5 \right) + G \left( -1 + 2x^2 - 3x^4 + x^6 \right) \right\}$$

$$\text{Out[323]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 (-x^4 + x^4 y) + \right. \\ \left. F^2 (-2x^3 + 2x^5 - xy + 2x^3 y - 2x^5 y) + F (1 - 2x^2 + 3x^4 - x^6 + 2x^2 y - 3x^4 y + x^6 y) \right\}$$



$$\text{Out[327]} = \left\{ -2G^3 x^3 - x^4 + x^6 + G^2 (1 - 3x^2 + 5x^4) + G (-x + 3x^3 - 4x^5) \right\}$$

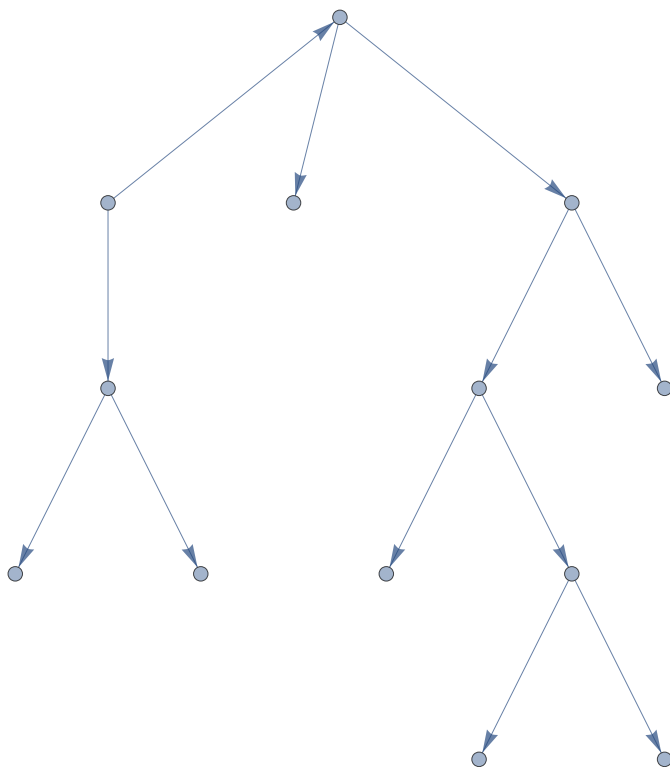
$$\text{Out[329]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2x^3 + xy - 2x^3 y) + \right. \\ \left. F^2 (-1 + 3x^2 - 5x^4 - 3x^2 y + 5x^4 y) + F (x - 3x^3 + 4x^5 + 3x^3 y - 4x^5 y) \right\}$$



$$\text{Out[333]} = \left\{ -2G^3 x^3 - x^4 + x^6 + G^2 (1 - 3x^2 + 5x^4) + G (-x + 3x^3 - 4x^5) \right\}$$

$$\text{Out[335]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2x^3 + xy - 2x^3 y) + \right. \\ \left. F^2 (-1 + 3x^2 - 5x^4 - 3x^2 y + 5x^4 y) + F (x - 3x^3 + 4x^5 + 3x^3 y - 4x^5 y) \right\}$$

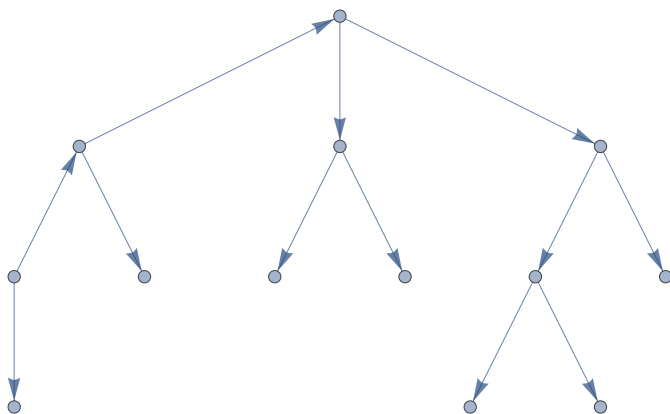
Out[337]=



$$\text{Out[339]} = \left\{ -x + x^3 + G(1 - 2x^2 + 2x^4) + G^2(-2x^3 + 2x^5) + G^3(-x^4 + x^6) \right\}$$

$$\text{Out[341]} = \left\{ x - x^3 + x^3 y + F(-1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y) + \right. \\ \left. F^2(2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y) + F^3(x^4 - x^6 - x^4 y + x^6 y) \right\}$$

Out[343]=

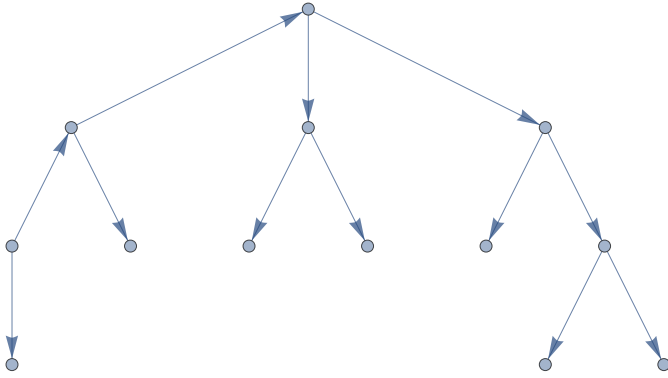


$$\text{Out[345]} = \left\{ x^4 + G^3(2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[347]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



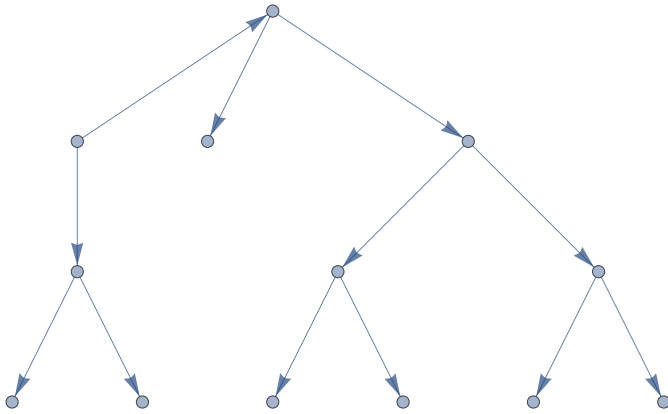
Out[349]=



$$\text{Out[351]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

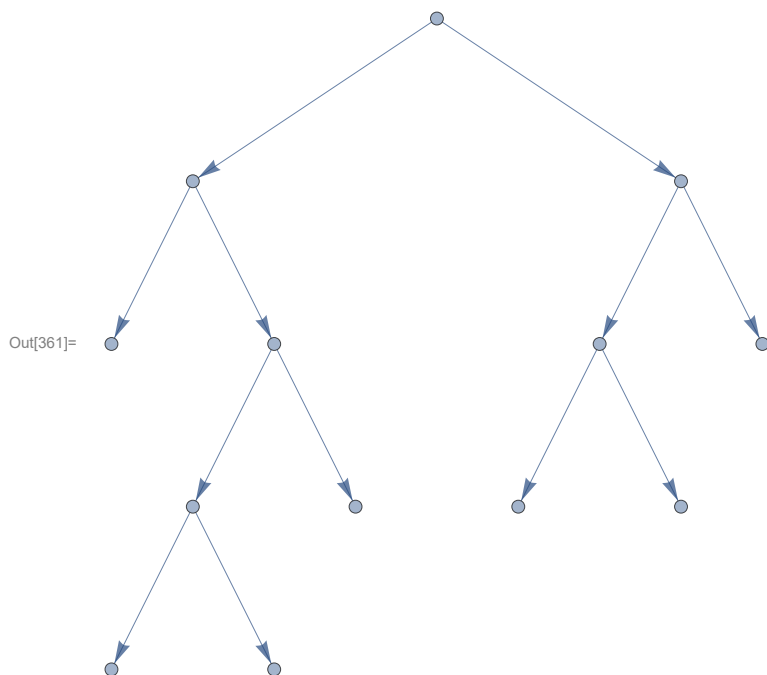
$$\text{Out[353]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$

Out[355]=



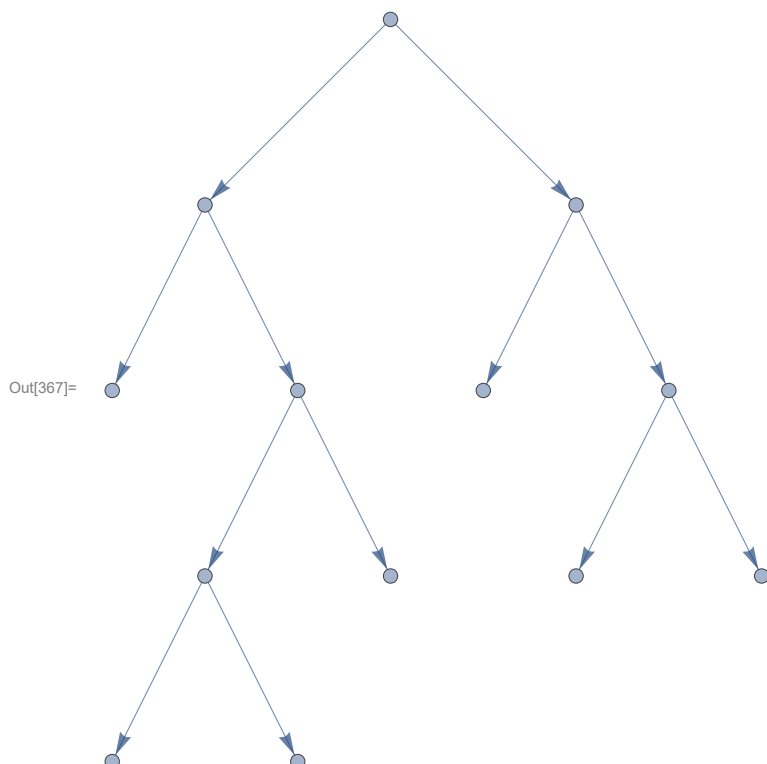
$$\text{Out[357]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[359]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2 (-3x^3 + 2x^5 - x y + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



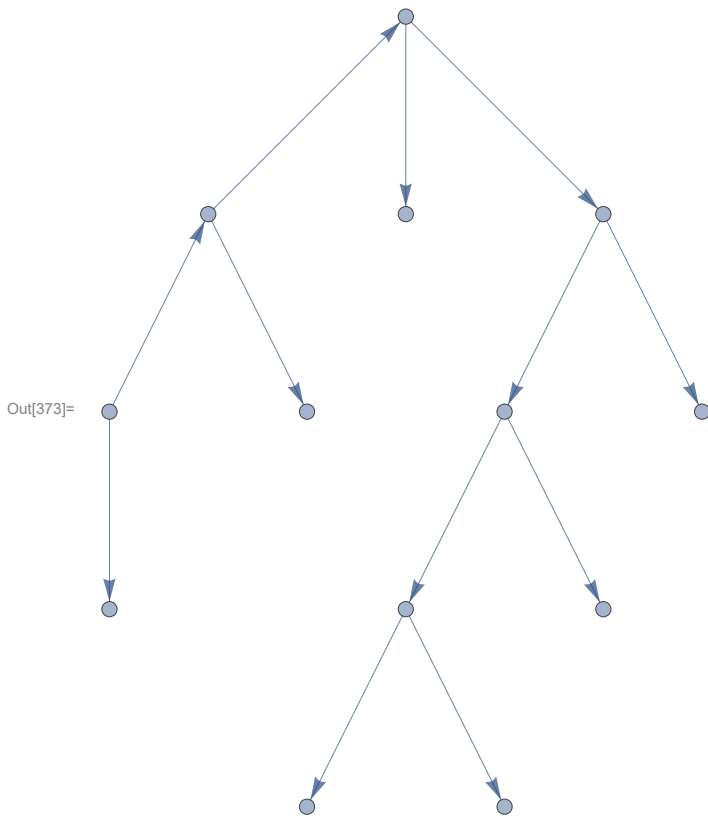
$$\text{Out[363]} = \left\{ -x + x^3 + G(1 - 2x^2 + 2x^4) + G^2(-2x^3 + 2x^5) + G^3(-x^4 + x^6) \right\}$$

$$\text{Out[365]} = \left\{ x - x^3 + x^3 y + F(-1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y) + F^2(2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y) + F^3(x^4 - x^6 - x^4 y + x^6 y) \right\}$$



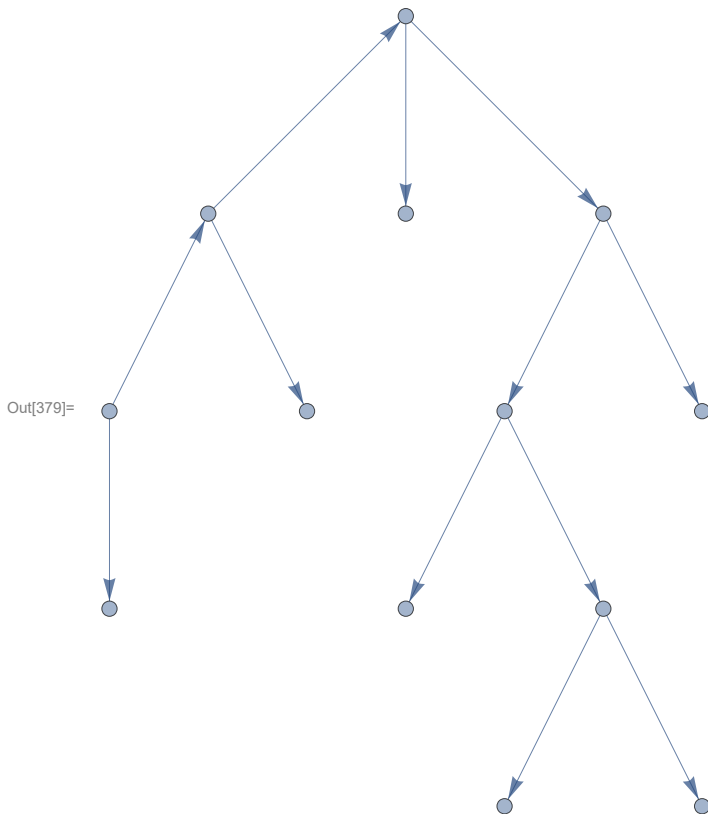
$$\text{Out[369]} = \left\{ -x + x^3 - x^5 + G^3 x^6 + G(1 - 2x^2 + 4x^4) + G^2(-3x^3 + x^5) \right\}$$

$$\text{Out[371]} = \left\{ x - x^3 + x^5 + x^3 y - x^5 y + F(-1 + 2x^2 - 4x^4 - 2x^2 y + 4x^4 y) + F^2(3x^3 - x^5 + xy - 3x^3 y + x^5 y) + F^3(-x^6 + x^6 y) \right\}$$



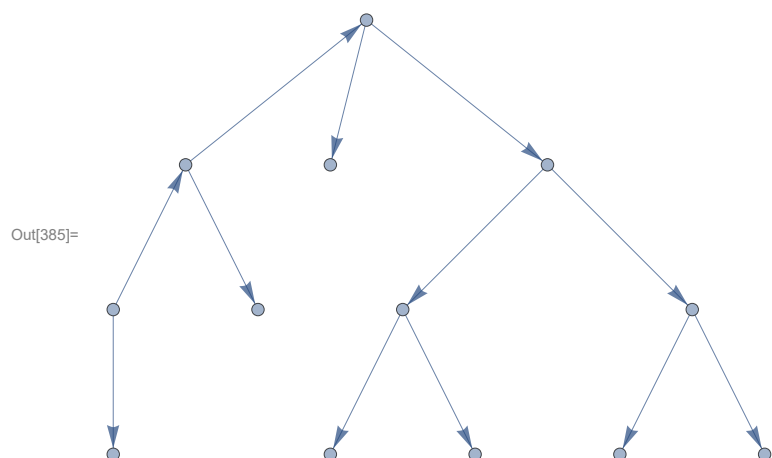
$$\text{Out[375]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G (x - 3x^3 + 2x^5) + G^2 (-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[377]} = \left\{ -x^4 + x^4 y + F^3 (-2x^3 + x^5 - x y + 2x^3 y - x^5 y) + \right. \\ \left. F (-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2 (1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



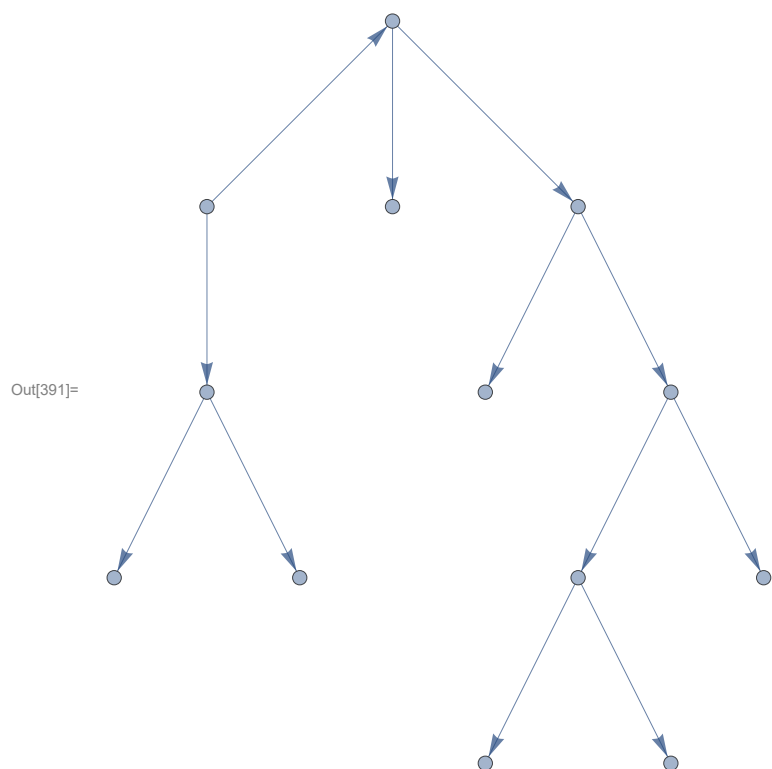
$$\text{Out[381]} = \left\{ -2 G^3 x^3 - x^4 + x^6 + G^2 (1 - 3 x^2 + 5 x^4) + G (-x + 3 x^3 - 4 x^5) \right\}$$

$$\text{Out[383]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2 x^3 + x y - 2 x^3 y) + \right. \\ \left. F^2 (-1 + 3 x^2 - 5 x^4 - 3 x^2 y + 5 x^4 y) + F (x - 3 x^3 + 4 x^5 + 3 x^3 y - 4 x^5 y) \right\}$$



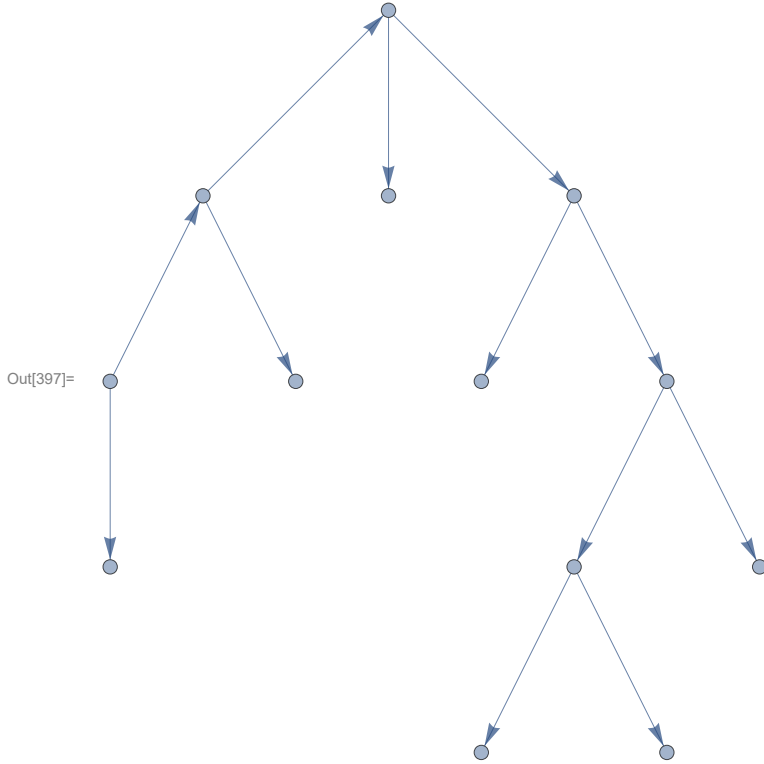
$$\text{Out[387]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4 x^2 + 3 x^4) + G^2 (-x + 6 x^3 - 3 x^5) + G (-4 x^4 + x^6) \right\}$$

$$\text{Out[389]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4 x^2 - 3 x^4 - 4 x^2 y + 3 x^4 y) + \right. \\ \left. F^2 (x - 6 x^3 + 3 x^5 + 6 x^3 y - 3 x^5 y) + F (4 x^4 - x^6 - 4 x^4 y + x^6 y) \right\}$$



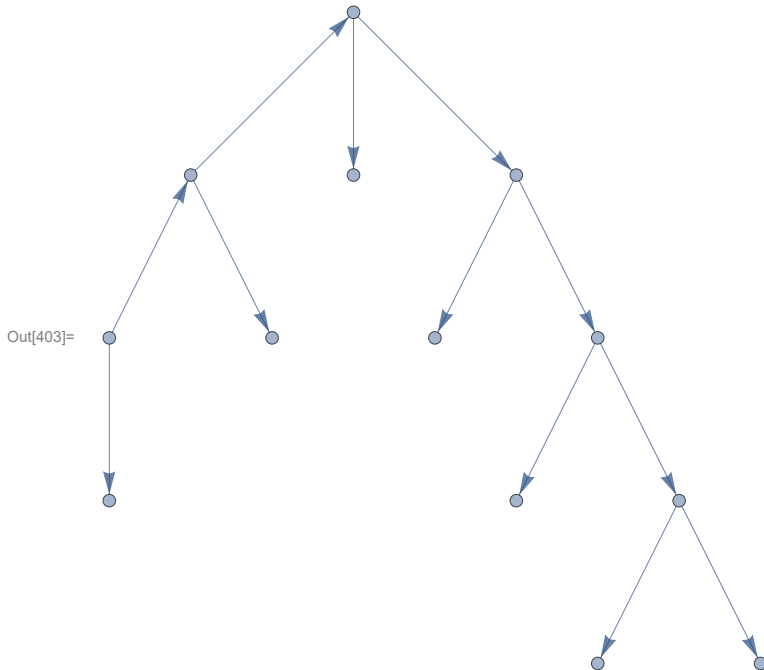
$$\text{Out[393]} = \left\{ -x^2 + x^4 + G (2 x - 3 x^3 + 3 x^5) + G^2 (-1 + 2 x^2 - 6 x^4 + 3 x^6) + G^3 (3 x^3 - 3 x^5 + x^7) \right\}$$

$$\text{Out[395]} = \left\{ x^2 - x^4 + x^4 y + F (-2 x + 3 x^3 - 3 x^5 - 3 x^3 y + 3 x^5 y) + \right. \\ \left. F^2 (1 - 2 x^2 + 6 x^4 - 3 x^6 + 3 x^2 y - 6 x^4 y + 3 x^6 y) + F^3 (-3 x^3 + 3 x^5 - x^7 - x y + 3 x^3 y - 3 x^5 y + x^7 y) \right\}$$



$$\text{Out[399]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

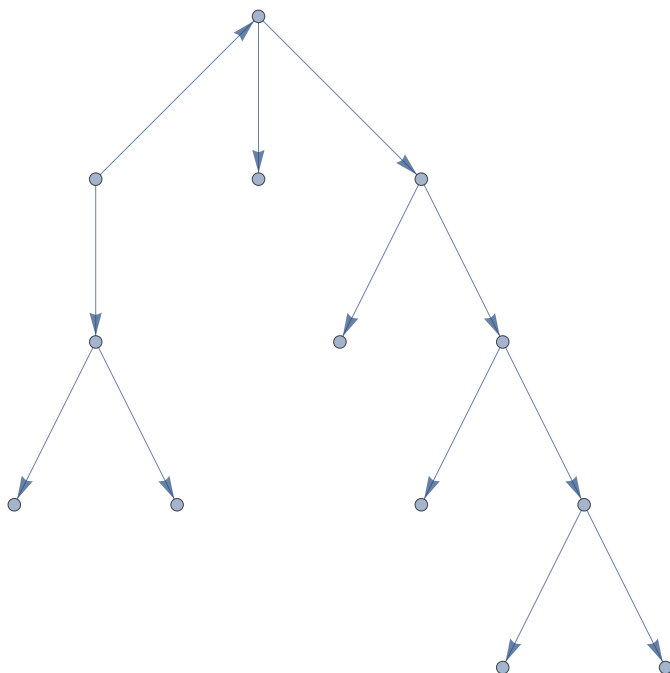
$$\text{Out[401]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[405]} = \left\{ 10G^2 x^4 - 5Gx^5 + x^6 + G^4 (-1 + 5x^2) + G^3 (x - 10x^3) \right\}$$

$$\text{Out[407]} = \left\{ -x^6 - F^5 x y + x^6 y + F^4 (1 - 5x^2 + 5x^2 y) + F^3 (-x + 10x^3 - 10x^3 y) + F^2 (-10x^4 + 10x^4 y) + F (5x^5 - 5x^5 y) \right\}$$

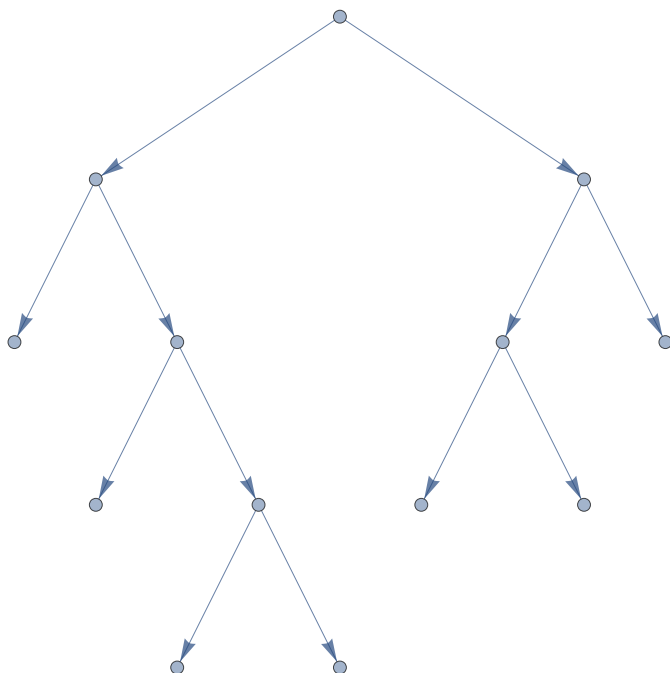
Out[409]=



$$\text{Out[411]} = \left\{ -x^2 + x^4 + G(2x - 3x^3 + 3x^5) + G^2(-1 + 2x^2 - 6x^4 + 3x^6) + G^3(3x^3 - 3x^5 + x^7) \right\}$$

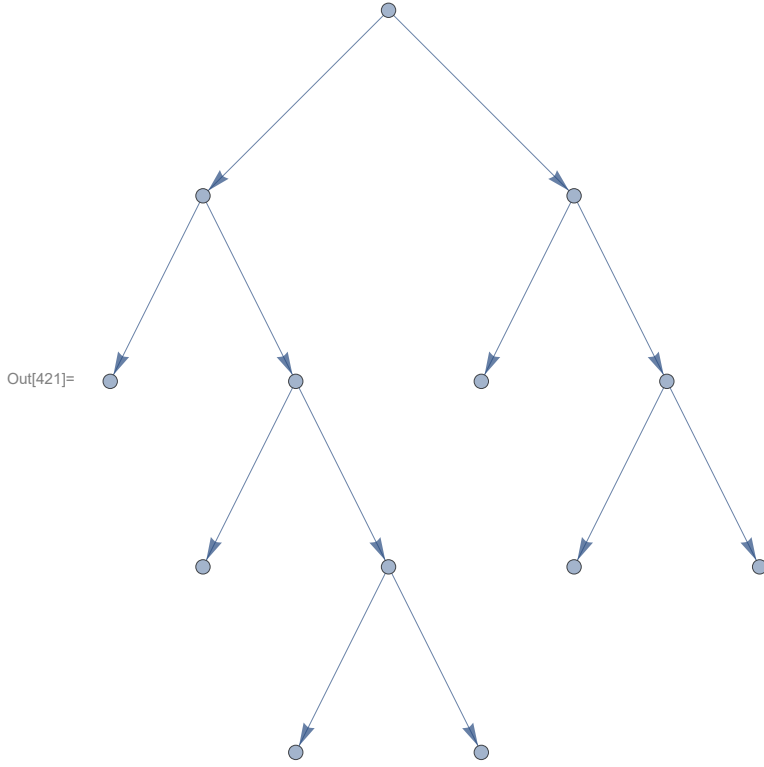
$$\text{Out[413]} = \left\{ x^2 - x^4 + x^4 y + F(-2x + 3x^3 - 3x^5 - 3x^3 y + 3x^5 y) + \right. \\ \left. F^2(1 - 2x^2 + 6x^4 - 3x^6 + 3x^2 y - 6x^4 y + 3x^6 y) + F^3(-3x^3 + 3x^5 - x^7 - xy + 3x^3 y - 3x^5 y + x^7 y) \right\}$$

Out[415]=



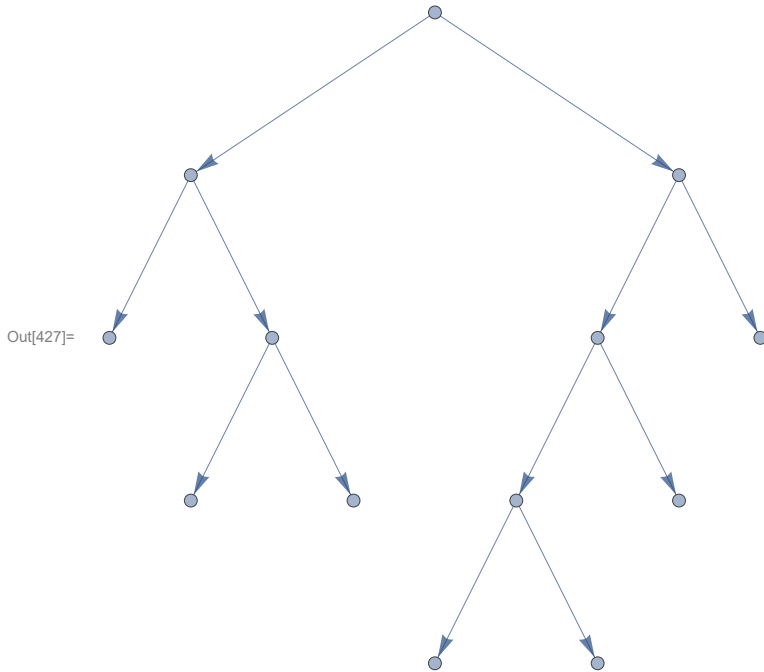
$$\text{Out[417]} = \left\{ -x + x^3 - x^5 + G^3 x^6 + G(1 - 2x^2 + 4x^4) + G^2(-3x^3 + x^5) \right\}$$

$$\text{Out[419]} = \left\{ x - x^3 + x^5 + x^3 y - x^5 y + F(-1 + 2x^2 - 4x^4 - 2x^2 y + 4x^4 y) + \right. \\ \left. F^2(3x^3 - x^5 + xy - 3x^3 y + x^5 y) + F^3(-x^6 + x^6 y) \right\}$$



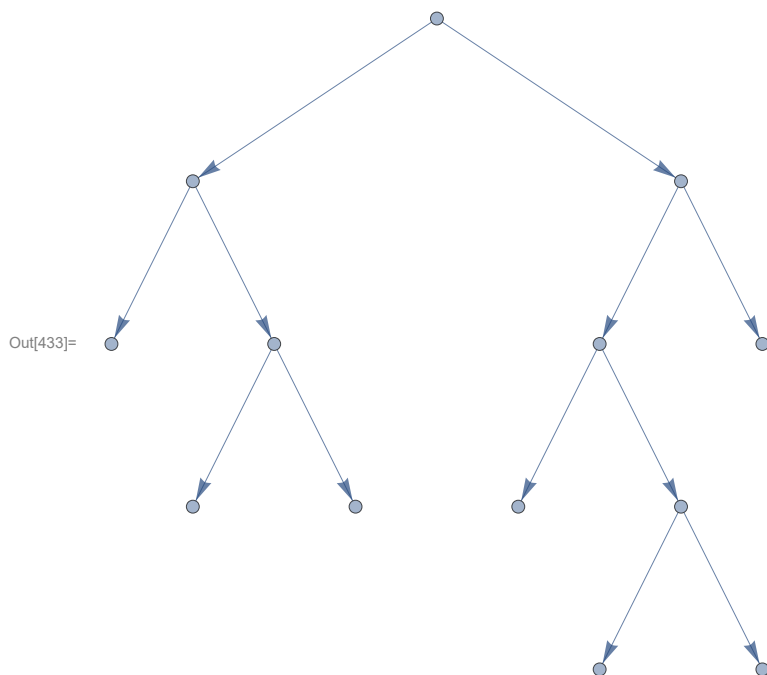
$$\text{Out[423]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[425]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



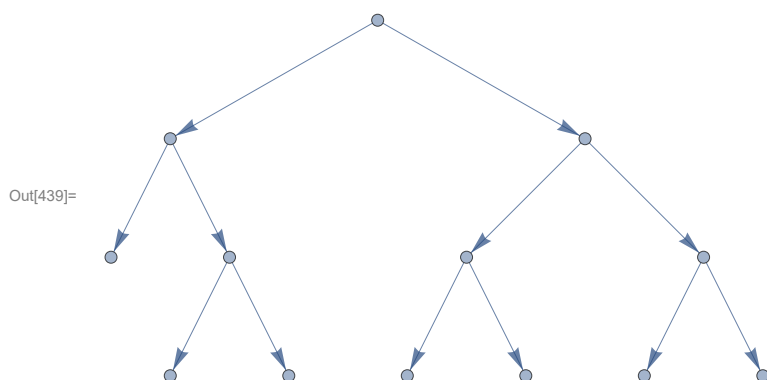
$$\text{Out[429]} = \left\{ -x + x^3 - x^5 + G^3 x^6 + G \left( 1 - 2x^2 + 4x^4 \right) + G^2 \left( -3x^3 + x^5 \right) \right\}$$

$$\text{Out[431]} = \left\{ x - x^3 + x^5 + x^3 y - x^5 y + F \left( -1 + 2x^2 - 4x^4 - 2x^2 y + 4x^4 y \right) + \right. \\ \left. F^2 \left( 3x^3 - x^5 + x y - 3x^3 y + x^5 y \right) + F^3 \left( -x^6 + x^6 y \right) \right\}$$



$$\text{Out[435]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

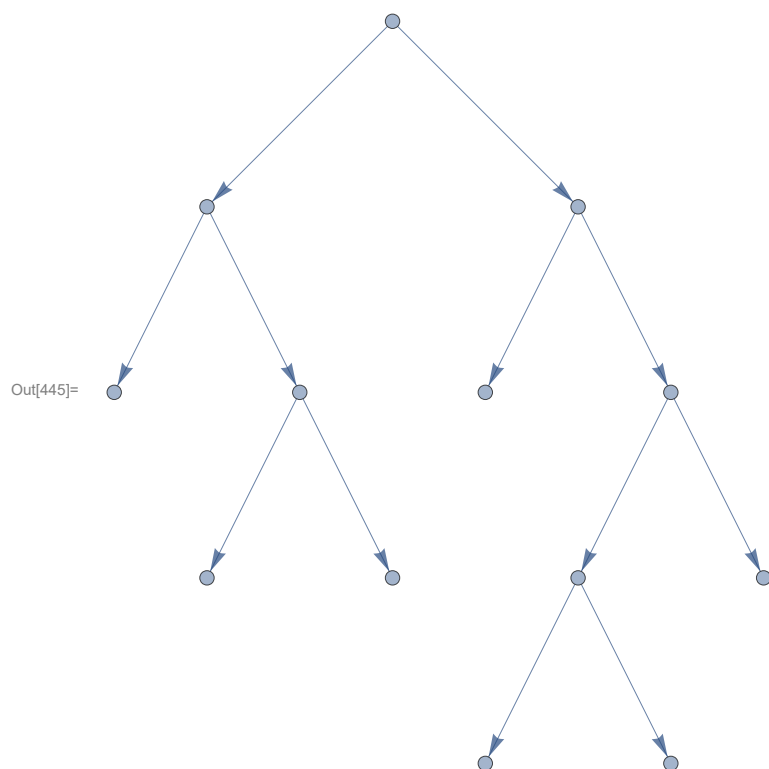
$$\text{Out[437]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[441]} = \left\{ x - x^3 + x^5 + G^2 \left( 3x^3 - 2x^5 \right) + G \left( -1 + 2x^2 - 4x^4 + x^6 \right) \right\}$$

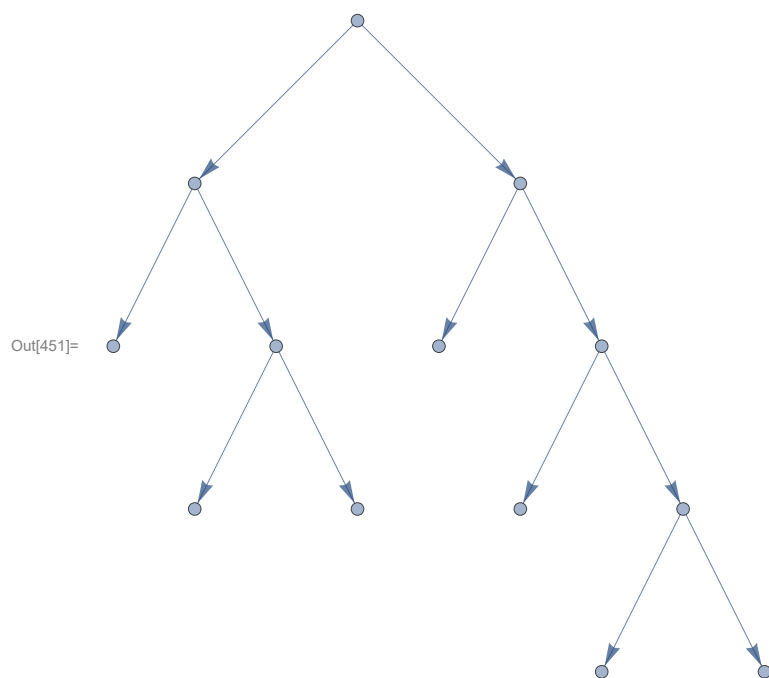
$$\text{Out[443]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 \left( -3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y \right) + F \left( 1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y \right) \right\}$$





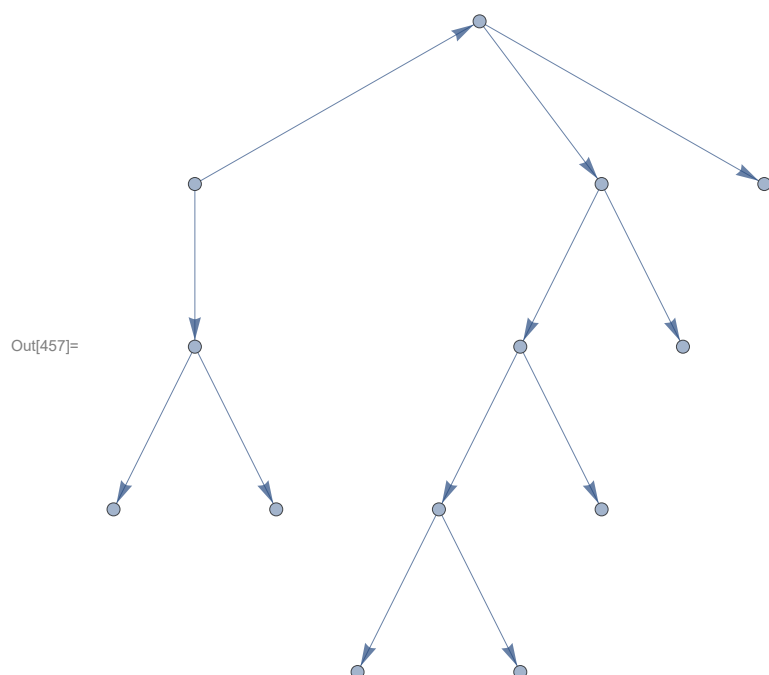
$$\text{Out[447]= } \left\{ x - x^3 + x^7 + G \left( -1 + 2 x^2 - 2 x^4 - 3 x^6 + 3 x^8 \right) + G^2 \left( 2 x^3 + x^5 - 6 x^7 + 3 x^9 \right) + G^3 \left( 2 x^6 - 3 x^8 + x^{10} \right) \right\}$$

$$\text{Out[449]} = \left\{ \begin{aligned} & \mathbf{x} - \mathbf{x}^3 + \mathbf{x}^7 + \mathbf{x}^3 \mathbf{y} - 2 \mathbf{x}^7 \mathbf{y} + \mathbf{x}^7 \mathbf{y}^2 + \\ & \mathbf{F} \left( -1 + 2 \mathbf{x}^2 - 2 \mathbf{x}^4 - 3 \mathbf{x}^6 + 3 \mathbf{x}^8 - 2 \mathbf{x}^2 \mathbf{y} + 2 \mathbf{x}^4 \mathbf{y} + 6 \mathbf{x}^6 \mathbf{y} - 6 \mathbf{x}^8 \mathbf{y} - 3 \mathbf{x}^6 \mathbf{y}^2 + 3 \mathbf{x}^8 \mathbf{y}^2 \right) + \\ & \mathbf{F}^2 \left( 2 \mathbf{x}^3 + \mathbf{x}^5 - 6 \mathbf{x}^7 + 3 \mathbf{x}^9 + \mathbf{x} \mathbf{y} - 2 \mathbf{x}^3 \mathbf{y} - 4 \mathbf{x}^5 \mathbf{y} + 12 \mathbf{x}^7 \mathbf{y} - 6 \mathbf{x}^9 \mathbf{y} + 3 \mathbf{x}^5 \mathbf{y}^2 - 6 \mathbf{x}^7 \mathbf{y}^2 + 3 \mathbf{x}^9 \mathbf{y}^2 \right) + \\ & \mathbf{F}^3 \left( 2 \mathbf{x}^6 - 3 \mathbf{x}^8 + \mathbf{x}^{10} + \mathbf{x}^4 \mathbf{y} - 5 \mathbf{x}^6 \mathbf{y} + 6 \mathbf{x}^8 \mathbf{y} - 2 \mathbf{x}^{10} \mathbf{y} - \mathbf{x}^4 \mathbf{y}^2 + 3 \mathbf{x}^6 \mathbf{y}^2 - 3 \mathbf{x}^8 \mathbf{y}^2 + \mathbf{x}^{10} \mathbf{y}^2 \right) \end{aligned} \right\}$$



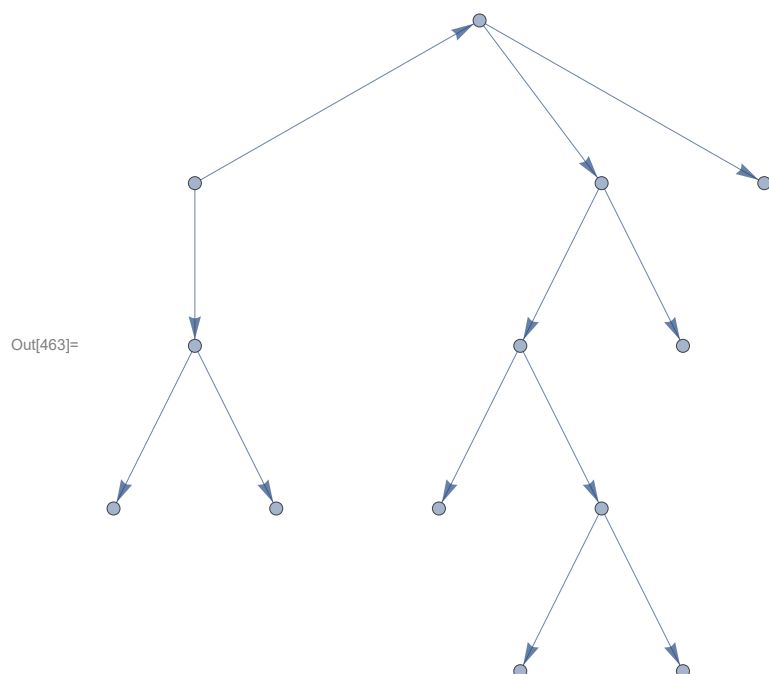
$$\text{Out[453]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[455]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2 x^2 - 2 x^4 - 2 x^2 y + 2 x^4 y \right) + \right. \\ \left. F^2 \left( 2 x^3 - 2 x^5 + x y - 2 x^3 y + 2 x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[459]} = \left\{ -x^2 + x^4 + G \left( 2 x - 3 x^3 + 3 x^5 \right) + G^2 \left( -1 + 2 x^2 - 6 x^4 + 3 x^6 \right) + G^3 \left( 3 x^3 - 3 x^5 + x^7 \right) \right\}$$

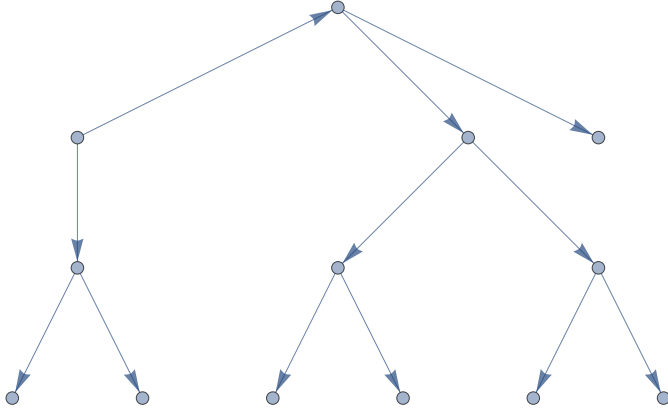
$$\text{Out[461]} = \left\{ x^2 - x^4 + x^4 y + F \left( -2 x + 3 x^3 - 3 x^5 - 3 x^3 y + 3 x^5 y \right) + \right. \\ \left. F^2 \left( 1 - 2 x^2 + 6 x^4 - 3 x^6 + 3 x^2 y - 6 x^4 y + 3 x^6 y \right) + F^3 \left( -3 x^3 + 3 x^5 - x^7 - x y + 3 x^3 y - 3 x^5 y + x^7 y \right) \right\}$$



$$\text{Out[465]} = \left\{ -x^2 + x^4 + G \left( 2 x - 3 x^3 + 3 x^5 \right) + G^2 \left( -1 + 2 x^2 - 6 x^4 + 3 x^6 \right) + G^3 \left( 3 x^3 - 3 x^5 + x^7 \right) \right\}$$

$$\text{Out[467]} = \left\{ x^2 - x^4 + x^4 y + F \left( -2 x + 3 x^3 - 3 x^5 - 3 x^3 y + 3 x^5 y \right) + \right. \\ \left. F^2 \left( 1 - 2 x^2 + 6 x^4 - 3 x^6 + 3 x^2 y - 6 x^4 y + 3 x^6 y \right) + F^3 \left( -3 x^3 + 3 x^5 - x^7 - x y + 3 x^3 y - 3 x^5 y + x^7 y \right) \right\}$$

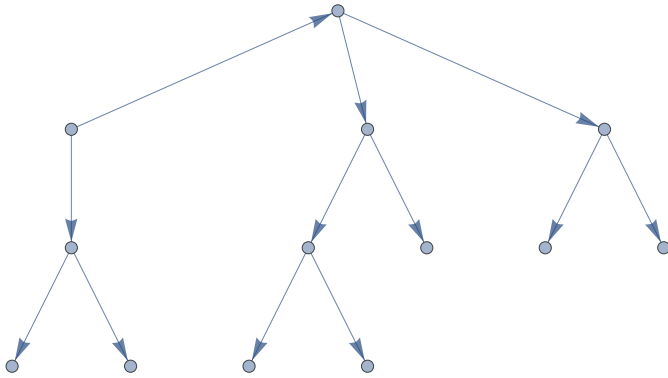
Out[469]=



$$\text{Out[471]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[473]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

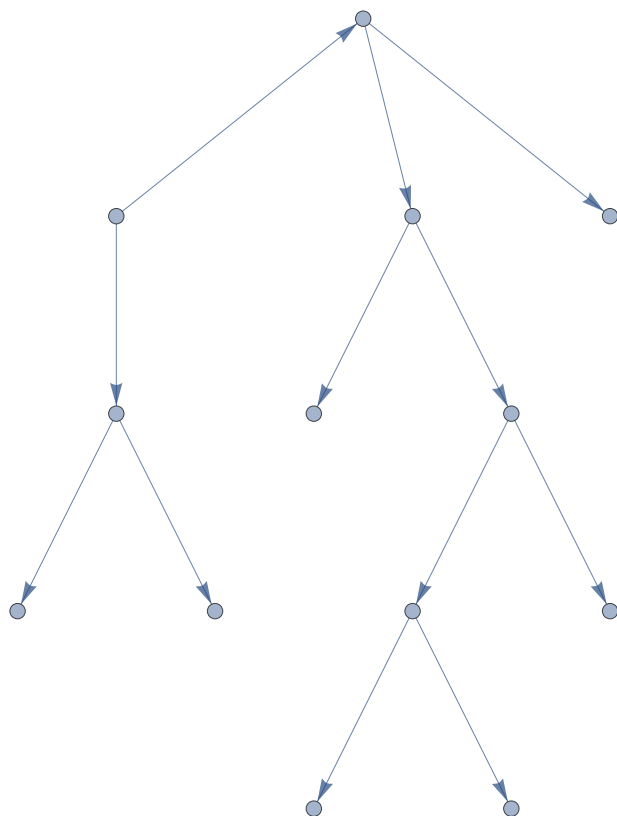
Out[475]=



$$\text{Out[477]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[479]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

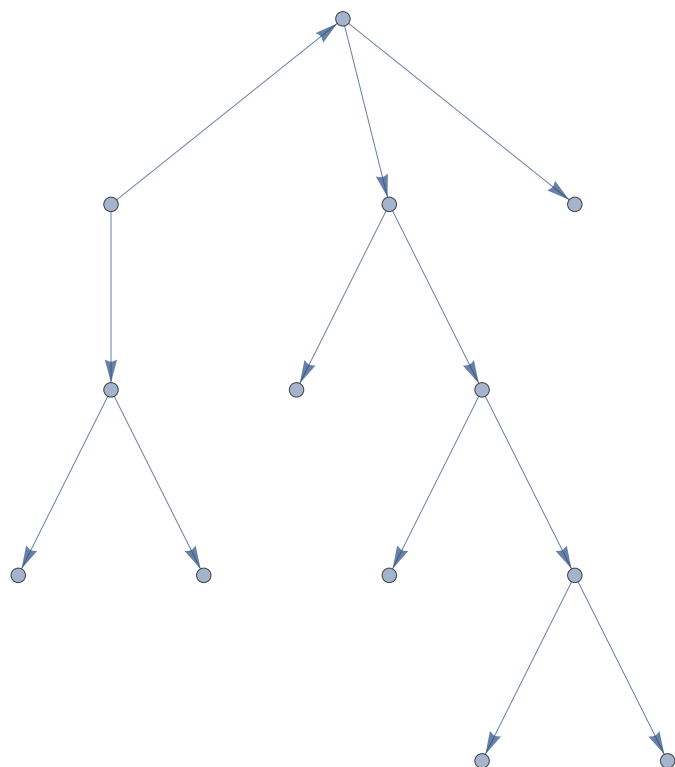
Out[481]=



$$\text{Out[483]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[485]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + F^2 \left( 2x^3 - 2x^5 + x y - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$

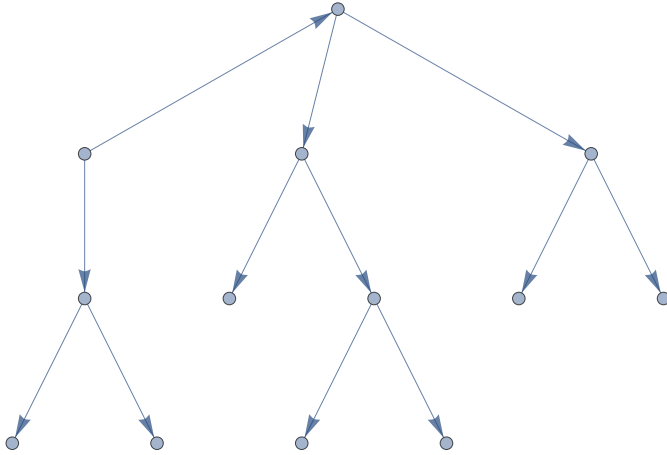
Out[487]=



$$\text{Out[489]} = \left\{ -x + x^3 - x^5 + G^3 x^6 + G \left( 1 - 2x^2 + 4x^4 \right) + G^2 \left( -3x^3 + x^5 \right) \right\}$$

$$\text{Out[491]} = \left\{ x - x^3 + x^5 + x^3 y - x^5 y + F(-1 + 2x^2 - 4x^4 - 2x^2 y + 4x^4 y) + F^2(3x^3 - x^5 + xy - 3x^3 y + x^5 y) + F^3(-x^6 + x^6 y) \right\}$$

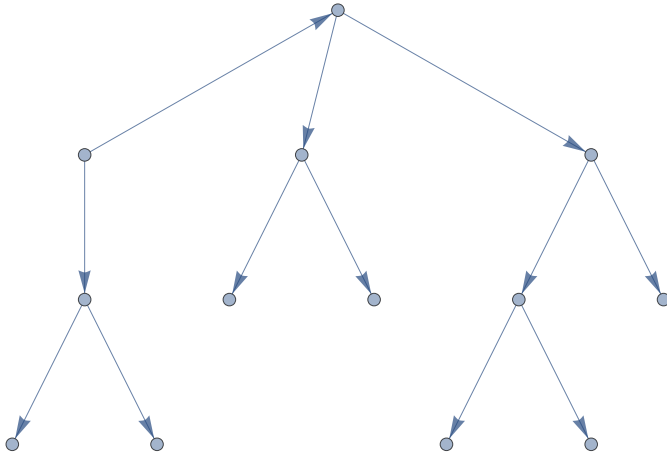
Out[493]=



$$\text{Out[495]} = \left\{ x - x^3 + x^5 + G^2(3x^3 - 2x^5) + G(-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[497]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2(-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F(1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

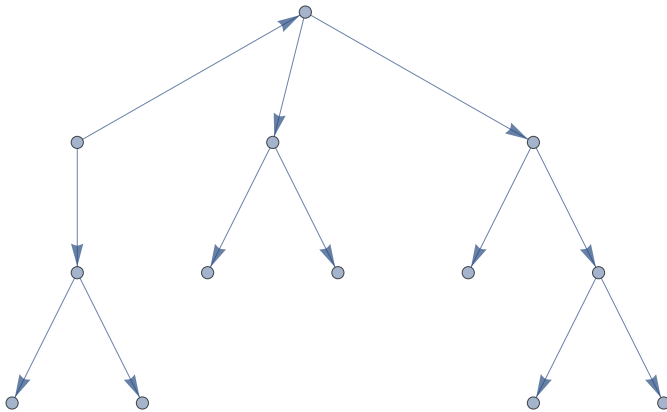
Out[499]=



$$\text{Out[501]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2(2x^3 - 2x^5) + G(-1 + 2x^2 - 3x^4 + x^6) \right\}$$

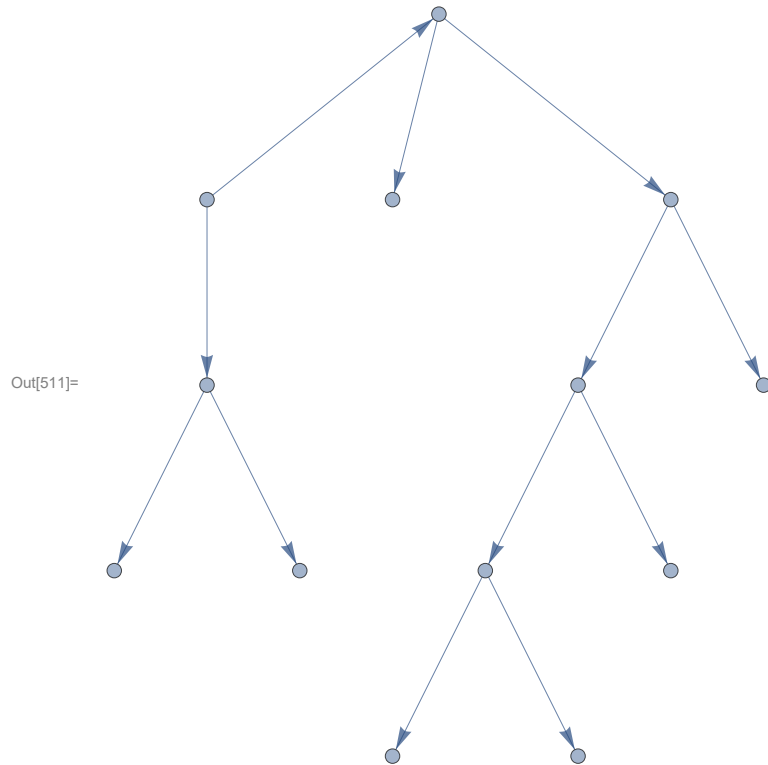
$$\text{Out[503]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3(-x^4 + x^4 y) + F^2(-2x^3 + 2x^5 - xy + 2x^3 y - 2x^5 y) + F(1 - 2x^2 + 3x^4 - x^6 + 2x^2 y - 3x^4 y + x^6 y) \right\}$$

Out[505]=



$$\text{Out[507]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 (2x^3 - 2x^5) + G (-1 + 2x^2 - 3x^4 + x^6) \right\}$$

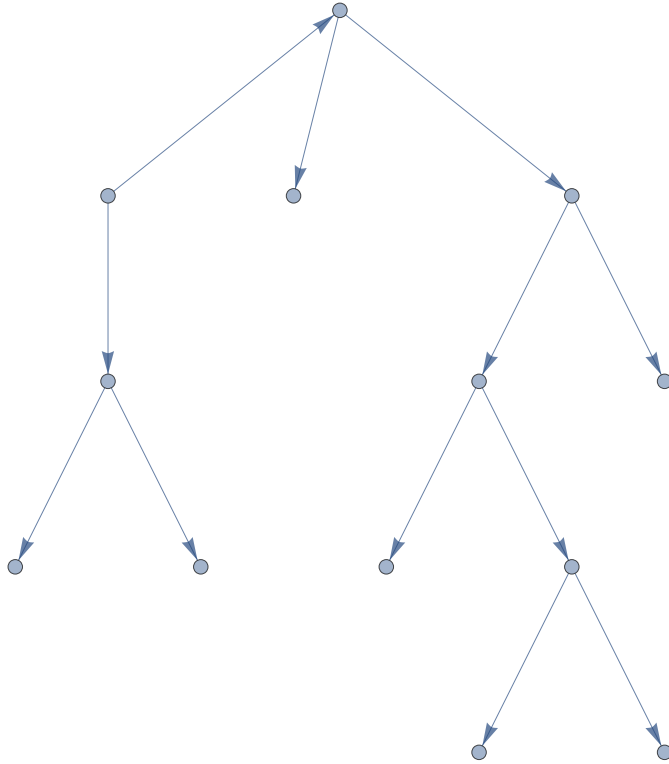
$$\text{Out[509]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 (-x^4 + x^4 y) + \right. \\ \left. F^2 (-2x^3 + 2x^5 - xy + 2x^3 y - 2x^5 y) + F (1 - 2x^2 + 3x^4 - x^6 + 2x^2 y - 3x^4 y + x^6 y) \right\}$$



$$\text{Out[513]} = \left\{ x - x^3 + x^7 + G (-1 + 2x^2 - 2x^4 - 3x^6 + 3x^8) + G^2 (2x^3 + x^5 - 6x^7 + 3x^9) + G^3 (2x^6 - 3x^8 + x^{10}) \right\}$$

$$\text{Out[515]} = \left\{ x - x^3 + x^7 + x^3 y - 2x^7 y + x^7 y^2 + \right. \\ F (-1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 - 2x^2 y + 2x^4 y + 6x^6 y - 6x^8 y - 3x^6 y^2 + 3x^8 y^2) + \\ F^2 (2x^3 + x^5 - 6x^7 + 3x^9 + xy - 2x^3 y - 4x^5 y + 12x^7 y - 6x^9 y + 3x^5 y^2 - 6x^7 y^2 + 3x^9 y^2) + \\ \left. F^3 (2x^6 - 3x^8 + x^{10} + x^4 y - 5x^6 y + 6x^8 y - 2x^{10} y - x^4 y^2 + 3x^6 y^2 - 3x^8 y^2 + x^{10} y^2) \right\}$$

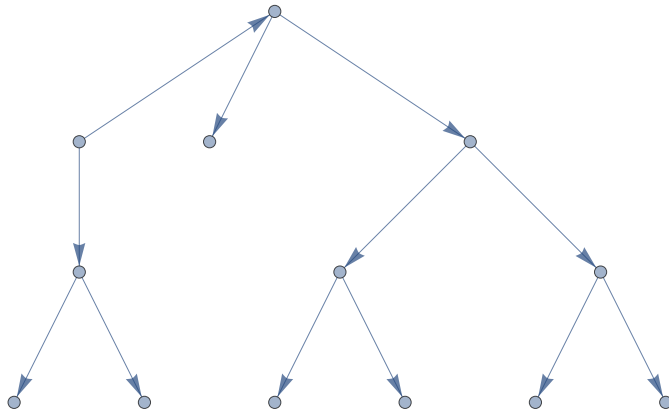
Out[517]=



$$\text{Out[519]} = \left\{ x - x^3 + x^7 + G \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 \right) + G^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 \right) + G^3 \left( 2x^6 - 3x^8 + x^{10} \right) \right\}$$

$$\begin{aligned} \text{Out[521]} = & \left\{ x - x^3 + x^7 + x^3 y - 2x^7 y + x^7 y^2 + \right. \\ & F \left( -1 + 2x^2 - 2x^4 - 3x^6 + 3x^8 - 2x^2 y + 2x^4 y + 6x^6 y - 6x^8 y - 3x^6 y^2 + 3x^8 y^2 \right) + \\ & F^2 \left( 2x^3 + x^5 - 6x^7 + 3x^9 + x y - 2x^3 y - 4x^5 y + 12x^7 y - 6x^9 y + 3x^5 y^2 - 6x^7 y^2 + 3x^9 y^2 \right) + \\ & \left. F^3 \left( 2x^6 - 3x^8 + x^{10} + x^4 y - 5x^6 y + 6x^8 y - 2x^{10} y - x^4 y^2 + 3x^6 y^2 - 3x^8 y^2 + x^{10} y^2 \right) \right\} \end{aligned}$$

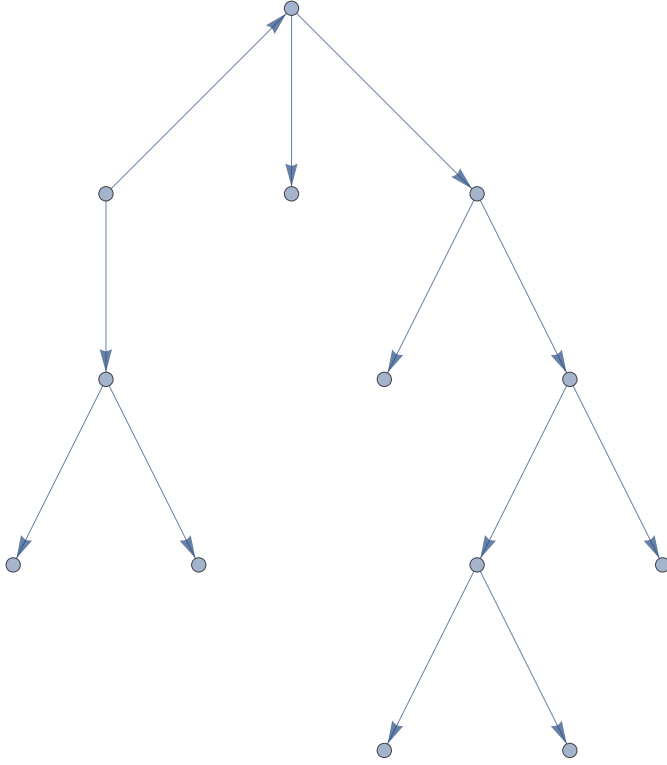
Out[523]=



$$\text{Out[525]} = \left\{ -x + x^3 - x^7 + x^9 + G^3 \left( -x^4 - 2x^6 \right) + G^2 \left( -x^3 + 5x^7 \right) + G \left( 1 - 2x^2 + x^4 + 2x^6 - 4x^8 \right) \right\}$$

$$\begin{aligned} \text{Out[527]} = & \left\{ -x + x^3 - x^7 + x^9 - x^3 y + 2x^7 y - 2x^9 y - x^7 y^2 + x^9 y^2 + F^3 \left( -x^4 - 2x^6 + 4x^6 y + x^4 y^2 - 2x^6 y^2 \right) + \right. \\ & F^2 \left( -x^3 + 5x^7 - x y + x^3 y + 3x^5 y - 10x^7 y - 3x^5 y^2 + 5x^7 y^2 \right) + \\ & \left. F \left( 1 - 2x^2 + x^4 + 2x^6 - 4x^8 + 2x^2 y - x^4 y - 5x^6 y + 8x^8 y + 3x^6 y^2 - 4x^8 y^2 \right) \right\} \end{aligned}$$

Out[529]=

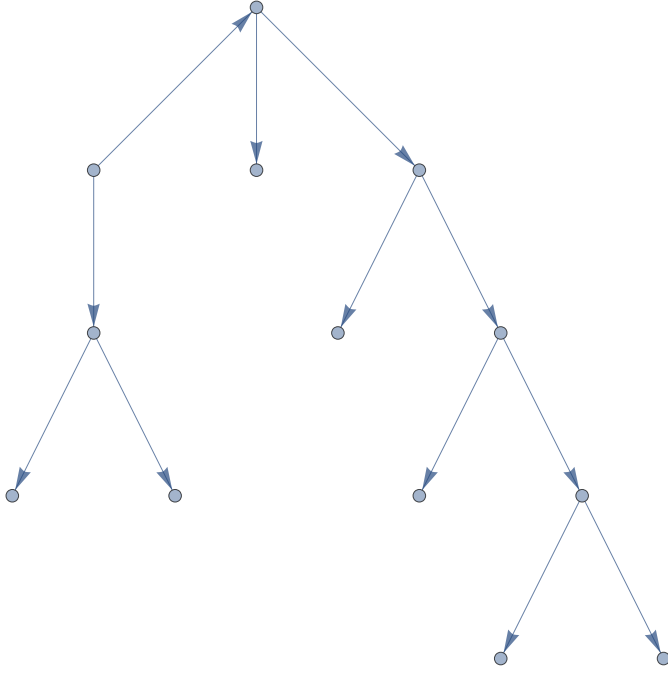


$$\text{Out[531]} = \left\{ -x + x^3 - x^5 + x^7 - x^9 + x^{11} + G^5 x^{12} + x^{15} + G^4 (x^7 + 2x^{11} - 4x^{13}) + G^3 (-x^4 - 5x^8 - 7x^{12} + 6x^{14}) + \right. \\ \left. G^2 (-2x^3 + 3x^5 - 2x^7 + 8x^9 + 9x^{13} - 4x^{15}) + G (1 - 2x^2 + 3x^4 - 3x^6 + 3x^8 - 5x^{10} - 5x^{14} + x^{16}) \right\}$$

$$\text{Out[533]} = \left\{ -x + x^3 - x^5 + x^7 - x^9 + x^{11} + x^{15} - x^3 y + x^5 y - 2x^7 y + 3x^9 y - 3x^{11} y - \right. \\ \left. 4x^{15} y + x^7 y^2 - 3x^9 y^2 + 3x^{11} y^2 + 6x^{15} y^2 + x^9 y^3 - x^{11} y^3 - 4x^{15} y^3 + x^{15} y^4 + \right. \\ \left. F^5 (x^{12} + x^{10} y - 4x^{12} y - 3x^{10} y^2 + 6x^{12} y^2 + 3x^{10} y^3 - 4x^{12} y^3 - x^{10} y^4 + x^{12} y^4) + \right. \\ \left. F^4 (x^7 + 2x^{11} - 4x^{13} - 4x^7 y - 11x^{11} y + 16x^{13} y - x^5 y^2 + 5x^7 y^2 + 21x^{11} y^2 - \right. \\ \left. 24x^{13} y^2 + x^5 y^3 - 2x^7 y^3 - 17x^{11} y^3 + 16x^{13} y^3 + 5x^{11} y^4 - 4x^{13} y^4) + \right. \\ \left. F^3 (-x^4 - 5x^8 - 7x^{12} + 6x^{14} + 2x^4 y - 3x^6 y + 17x^8 y + 31x^{12} y - 24x^{14} y - x^4 y^2 + 7x^6 y^2 - \right. \\ \left. 19x^8 y^2 - 51x^{12} y^2 + 36x^{14} y^2 - 4x^6 y^3 + 7x^8 y^3 + 37x^{12} y^3 - 24x^{14} y^3 - 10x^{12} y^4 + 6x^{14} y^4) + \right. \\ \left. F^2 (-2x^3 + 3x^5 - 2x^7 + 8x^9 + 9x^{13} - 4x^{15} - x y + 2x^3 y - 6x^5 y + 10x^7 y - 25x^9 y - \right. \\ \left. 37x^{13} y + 16x^{15} y + 3x^5 y^2 - 14x^7 y^2 + 26x^9 y^2 + 57x^{13} y^2 - 24x^{15} y^2 + \right. \\ \left. 6x^7 y^3 - 9x^9 y^3 - 39x^{13} y^3 + 16x^{15} y^3 + 10x^{13} y^4 - 4x^{15} y^4) + \right. \\ \left. F (1 - 2x^2 + 3x^4 - 3x^6 + 3x^8 - 5x^{10} - 5x^{14} + x^{16} + 2x^2 y - 3x^4 y + 6x^6 y - 10x^8 y + \right. \\ \left. 15x^{10} y + 20x^{14} y - 4x^{16} y - 3x^6 y^2 + 11x^8 y^2 - 15x^{10} y^2 - 30x^{14} y^2 + \right. \\ \left. 6x^{16} y^2 - 4x^8 y^3 + 5x^{10} y^3 + 20x^{14} y^3 - 4x^{16} y^3 - 5x^{14} y^4 + x^{16} y^4) \right\}$$



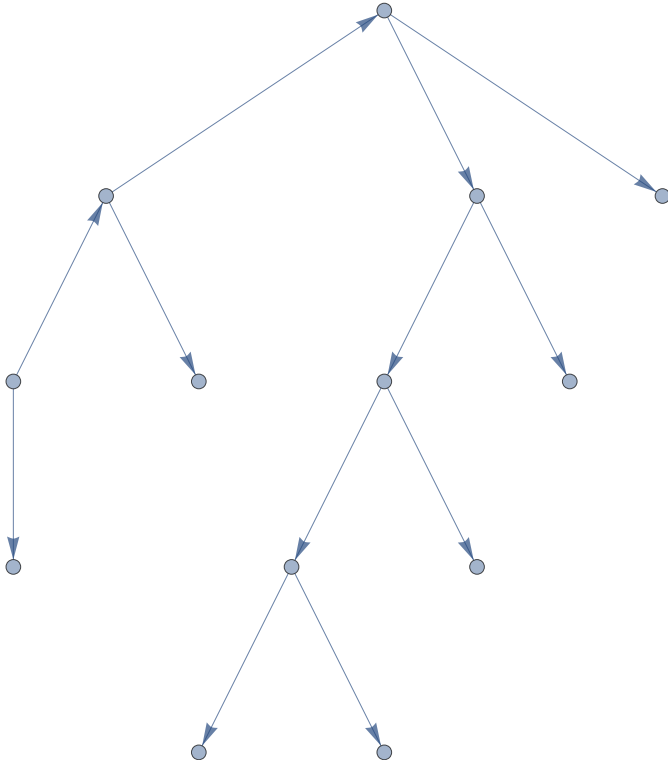
Out[535]=



$$\text{Out[537]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

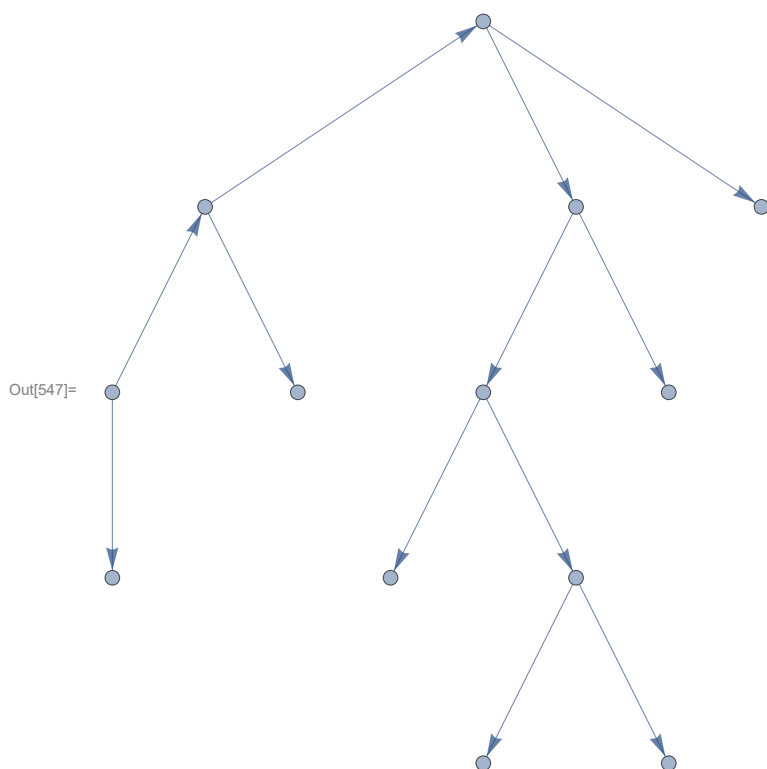
$$\text{Out[539]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$

Out[541]=



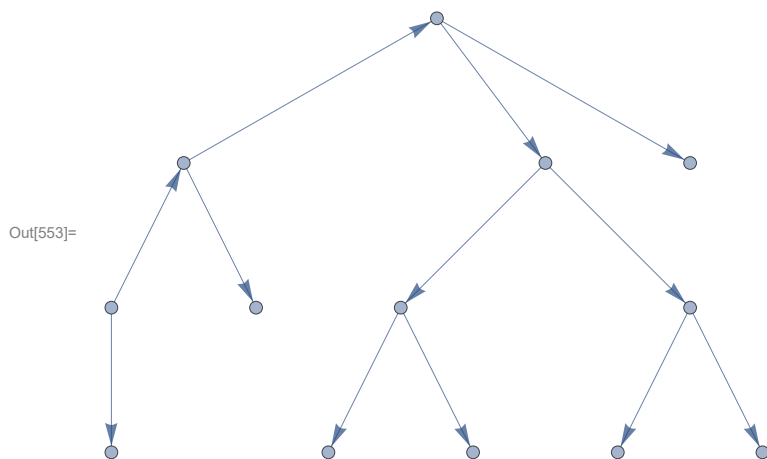
$$\text{Out[543]} = \left\{ 10 G^2 x^4 - 5 G x^5 + x^6 + G^4 \left( -1 + 5x^2 \right) + G^3 \left( x - 10x^3 \right) \right\}$$

$$\text{Out[545]} = \left\{ -x^6 - F^5 x y + x^6 y + F^4 \left( 1 - 5x^2 + 5x^2 y \right) + \right. \\ \left. F^3 \left( -x + 10x^3 - 10x^3 y \right) + F^2 \left( -10x^4 + 10x^4 y \right) + F \left( 5x^5 - 5x^5 y \right) \right\}$$



$$\text{Out[549]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

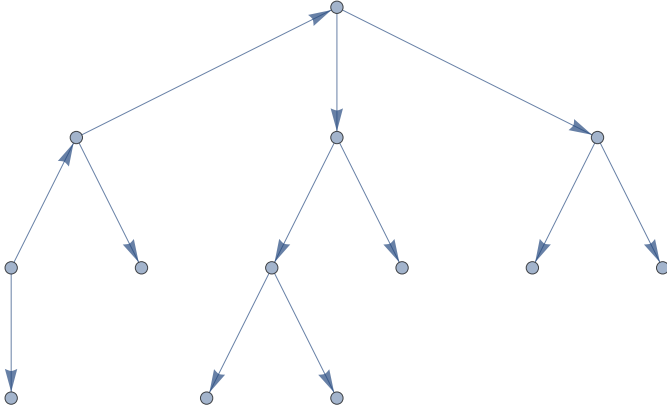
$$\text{Out[551]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[555]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

$$\text{Out[557]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$

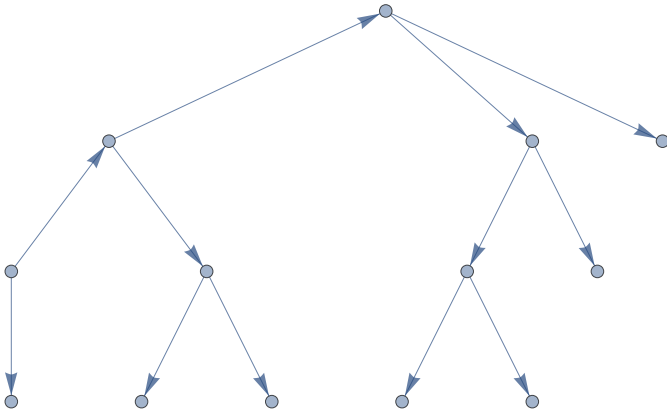
Out[559]=



$$\text{Out[561]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

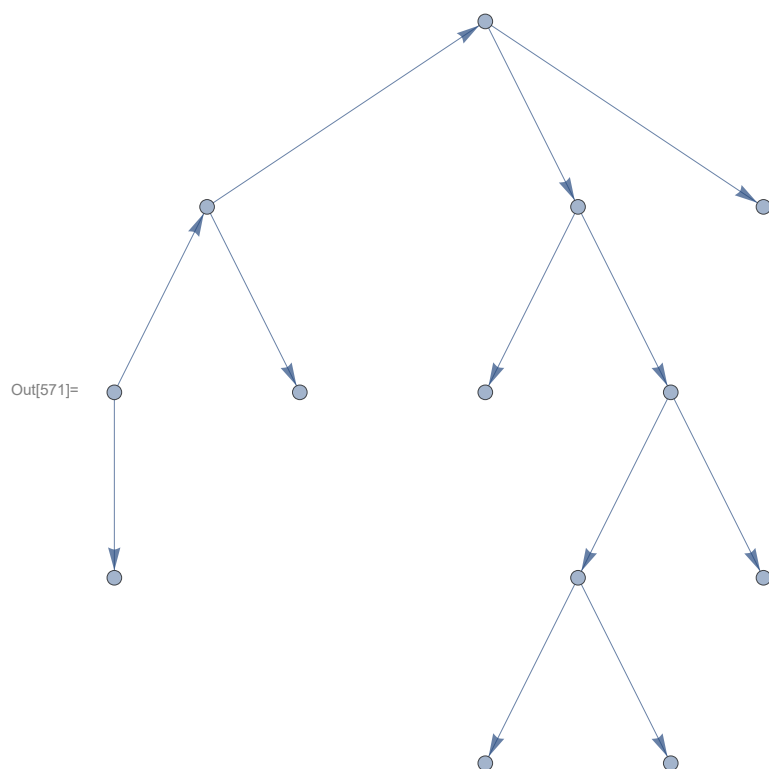
$$\text{Out[563]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$

Out[565]=



$$\text{Out[567]} = \left\{ -G^4 x^3 + x^5 + G^3 (1 - 4x^2 + 3x^4) + G^2 (-x + 6x^3 - 3x^5) + G (-4x^4 + x^6) \right\}$$

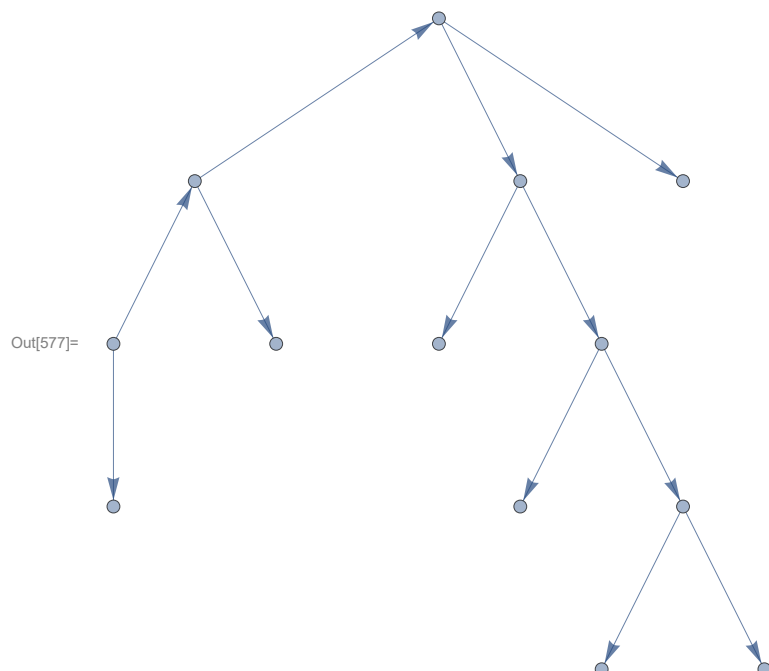
$$\text{Out[569]} = \left\{ -x^5 + x^5 y + F^4 (x^3 + x y - x^3 y) + F^3 (-1 + 4x^2 - 3x^4 - 4x^2 y + 3x^4 y) + F^2 (x - 6x^3 + 3x^5 + 6x^3 y - 3x^5 y) + F (4x^4 - x^6 - 4x^4 y + x^6 y) \right\}$$



Out[571]=

$$\text{Out[573]} = \left\{ -2 G^3 x^3 - x^4 + x^6 + G^2 (1 - 3 x^2 + 5 x^4) + G (-x + 3 x^3 - 4 x^5) \right\}$$

$$\text{Out[575]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2 x^3 + x y - 2 x^3 y) + \right. \\ \left. F^2 (-1 + 3 x^2 - 5 x^4 - 3 x^2 y + 5 x^4 y) + F (x - 3 x^3 + 4 x^5 + 3 x^3 y - 4 x^5 y) \right\}$$

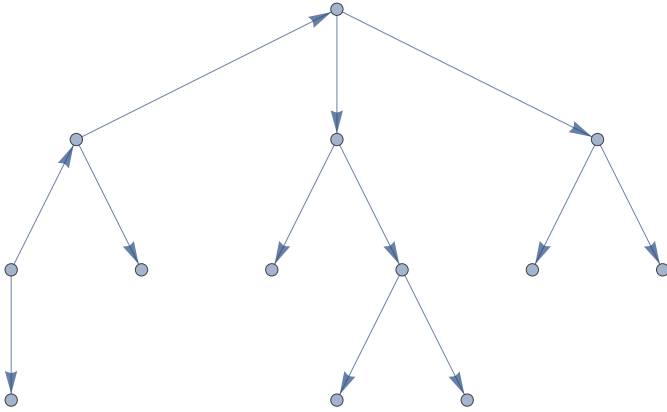


Out[577]=

$$\text{Out[579]} = \left\{ x^4 + G^3 (2 x^3 - x^5) + G (x - 3 x^3 + 2 x^5) + G^2 (-1 + 3 x^2 - 4 x^4 + x^6) \right\}$$

$$\text{Out[581]} = \left\{ -x^4 + x^4 y + F^3 (-2 x^3 + x^5 - x y + 2 x^3 y - x^5 y) + \right. \\ \left. F (-x + 3 x^3 - 2 x^5 - 3 x^3 y + 2 x^5 y) + F^2 (1 - 3 x^2 + 4 x^4 - x^6 + 3 x^2 y - 4 x^4 y + x^6 y) \right\}$$

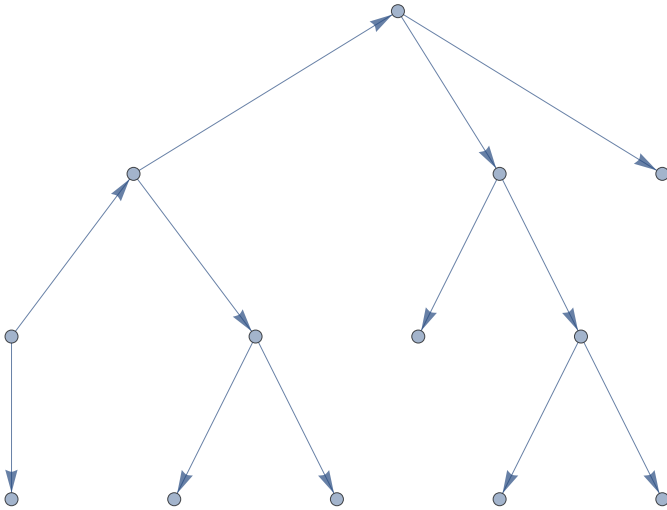
Out[583]=



$$\text{Out[585]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[587]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$

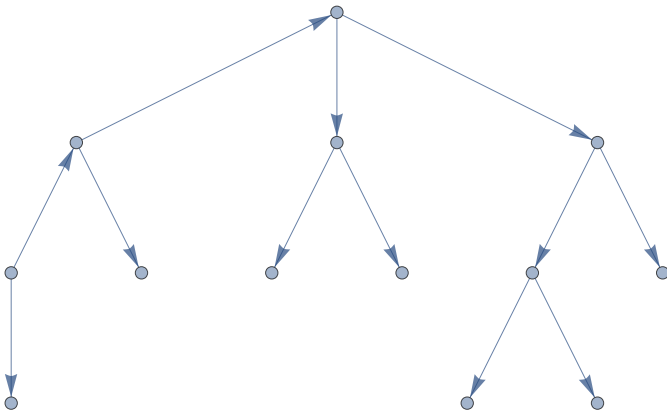
Out[589]=



$$\text{Out[591]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

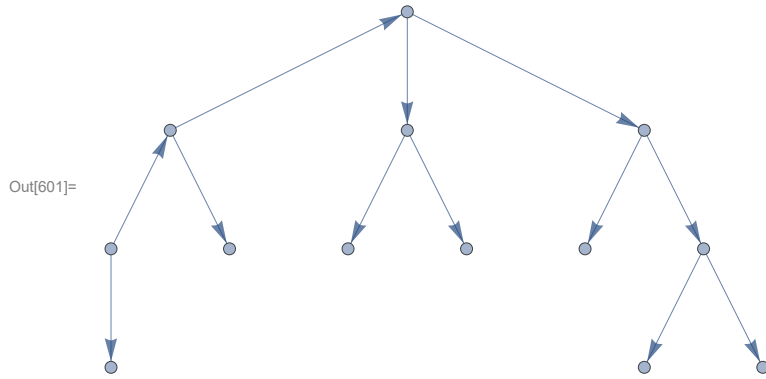
$$\text{Out[593]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$

Out[595]=



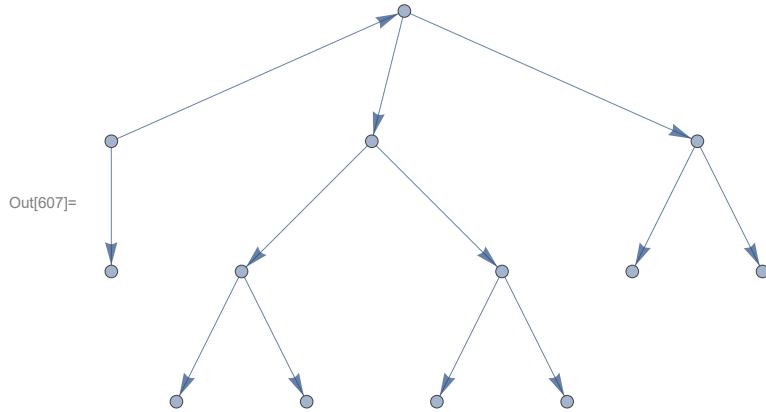
$$\text{Out[597]} = \left\{ -2G^3 x^3 - x^4 + x^6 + G^2(1 - 3x^2 + 5x^4) + G(-x + 3x^3 - 4x^5) \right\}$$

$$\text{Out[599]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2 x^3 + x y - 2 x^3 y) + \right. \\ \left. F^2 (-1 + 3 x^2 - 5 x^4 - 3 x^2 y + 5 x^4 y) + F (x - 3 x^3 + 4 x^5 + 3 x^3 y - 4 x^5 y) \right\}$$



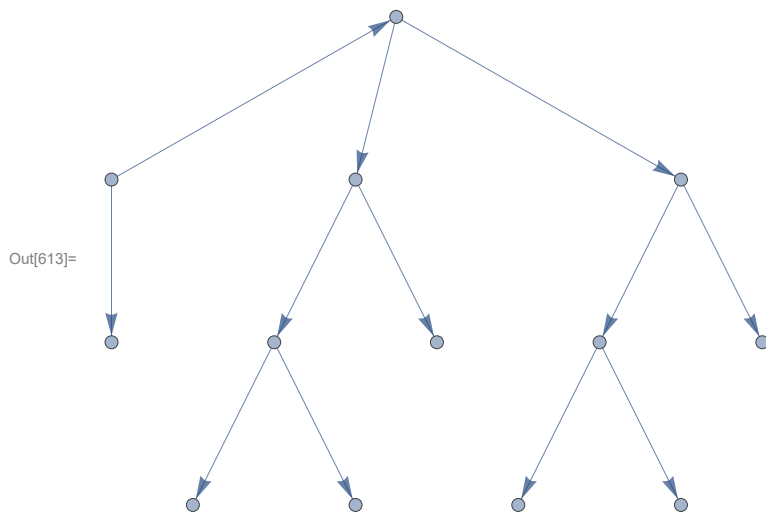
$$\text{Out[603]} = \left\{ x^4 + G^3 (2 x^3 - x^5) + G (x - 3 x^3 + 2 x^5) + G^2 (-1 + 3 x^2 - 4 x^4 + x^6) \right\}$$

$$\text{Out[605]} = \left\{ -x^4 + x^4 y + F^3 (-2 x^3 + x^5 - x y + 2 x^3 y - x^5 y) + \right. \\ \left. F (-x + 3 x^3 - 2 x^5 - 3 x^3 y + 2 x^5 y) + F^2 (1 - 3 x^2 + 4 x^4 - x^6 + 3 x^2 y - 4 x^4 y + x^6 y) \right\}$$



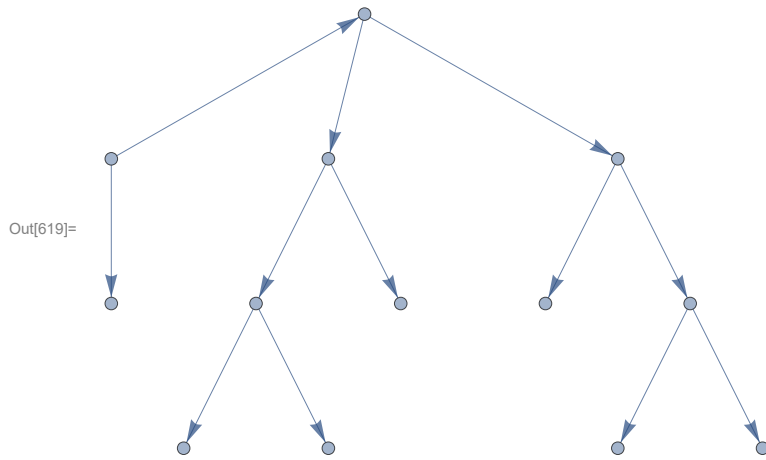
$$\text{Out[609]} = \left\{ x^4 + G^3 (2 x^3 - x^5) + G (x - 3 x^3 + 2 x^5) + G^2 (-1 + 3 x^2 - 4 x^4 + x^6) \right\}$$

$$\text{Out[611]} = \left\{ -x^4 + x^4 y + F^3 (-2 x^3 + x^5 - x y + 2 x^3 y - x^5 y) + \right. \\ \left. F (-x + 3 x^3 - 2 x^5 - 3 x^3 y + 2 x^5 y) + F^2 (1 - 3 x^2 + 4 x^4 - x^6 + 3 x^2 y - 4 x^4 y + x^6 y) \right\}$$



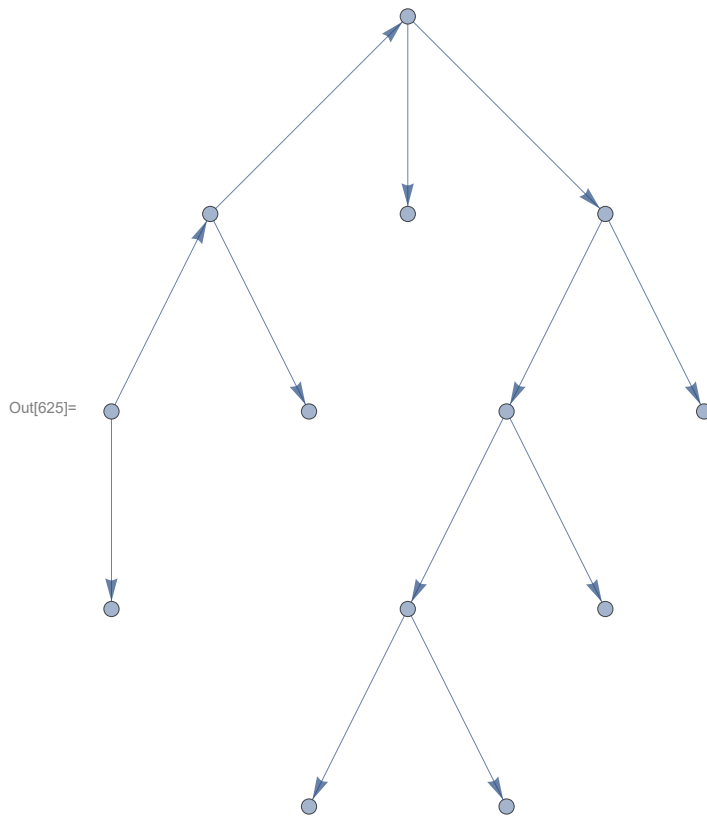
$$\text{Out[615]} = \left\{ -2 G^3 x^3 - x^4 + x^6 + G^2 (1 - 3 x^2 + 5 x^4) + G (-x + 3 x^3 - 4 x^5) \right\}$$

$$\text{Out[617]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2 x^3 + x y - 2 x^3 y) + \right. \\ \left. F^2 (-1 + 3 x^2 - 5 x^4 - 3 x^2 y + 5 x^4 y) + F (x - 3 x^3 + 4 x^5 + 3 x^3 y - 4 x^5 y) \right\}$$



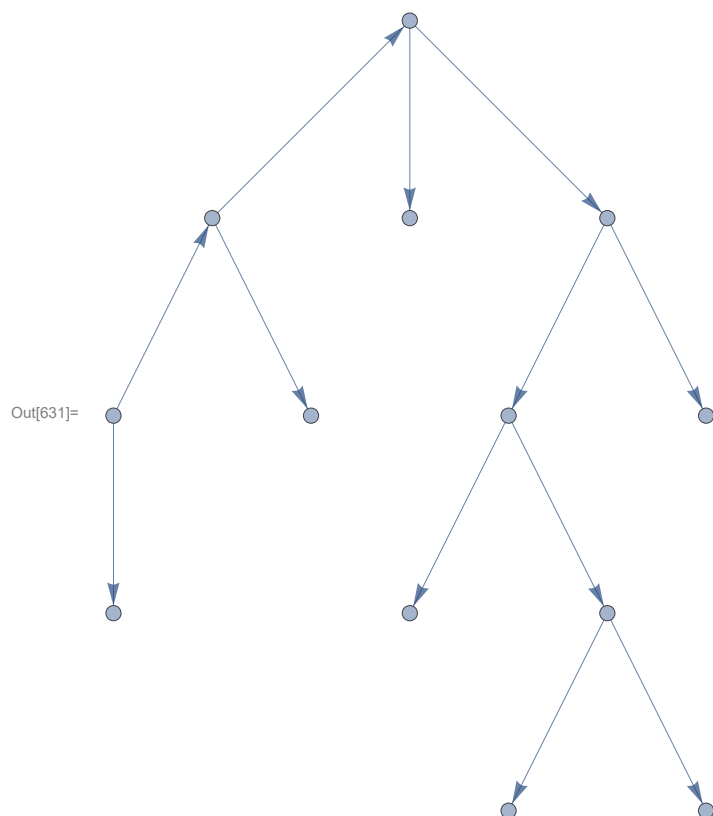
$$\text{Out[621]} = \left\{ x^4 + G^4 x^4 + G^3 (x^3 - 2 x^5) + G (x - 3 x^3 + x^5) + G^2 (-1 + 3 x^2 - 2 x^4 + x^6) \right\}$$

$$\text{Out[623]} = \left\{ -x^4 + x^4 y + F^4 (-x^4 + x^4 y) + F^3 (-x^3 + 2 x^5 - x y + x^3 y - 2 x^5 y) + \right. \\ \left. F (-x + 3 x^3 - x^5 - 3 x^3 y + x^5 y) + F^2 (1 - 3 x^2 + 2 x^4 - x^6 + 3 x^2 y - 2 x^4 y + x^6 y) \right\}$$



$$\text{Out[627]} = \left\{ -2 G^3 x^3 - x^4 + x^6 + G^2 (1 - 3 x^2 + 5 x^4) + G (-x + 3 x^3 - 4 x^5) \right\}$$

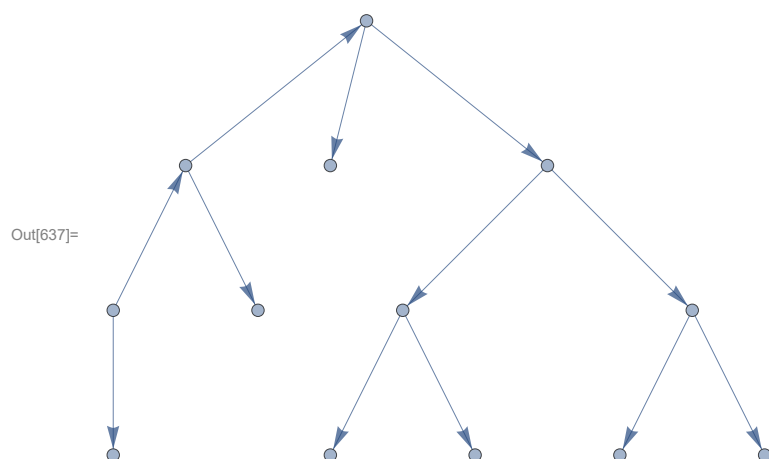
$$\text{Out[629]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3 (2 x^3 + x y - 2 x^3 y) + \right. \\ \left. F^2 (-1 + 3 x^2 - 5 x^4 - 3 x^2 y + 5 x^4 y) + F (x - 3 x^3 + 4 x^5 + 3 x^3 y - 4 x^5 y) \right\}$$



Out[631]=

$$\text{Out[633]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 (2 x^3 - 2 x^5) + G (-1 + 2 x^2 - 3 x^4 + x^6) \right\}$$

$$\text{Out[635]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 (-x^4 + x^4 y) + \right. \\ \left. F^2 (-2 x^3 + 2 x^5 - x y + 2 x^3 y - 2 x^5 y) + F (1 - 2 x^2 + 3 x^4 - x^6 + 2 x^2 y - 3 x^4 y + x^6 y) \right\}$$



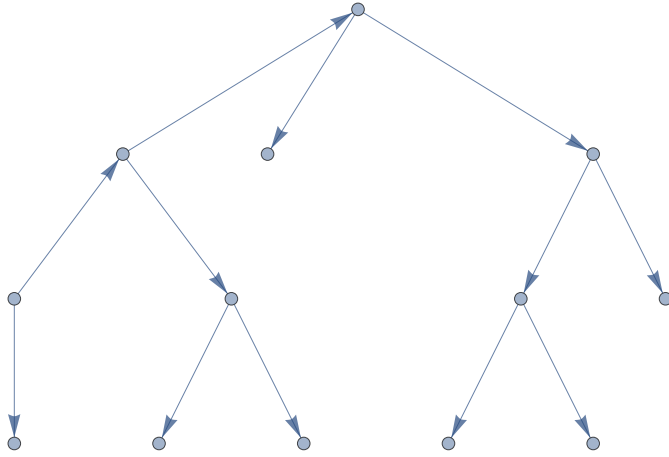
Out[637]=

$$\text{Out[639]} = \left\{ x - x^3 + x^5 + G^2 (3 x^3 - 2 x^5) + G (-1 + 2 x^2 - 4 x^4 + x^6) \right\}$$

$$\text{Out[641]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3 x^3 + 2 x^5 - x y + 3 x^3 y - 2 x^5 y) + F (1 - 2 x^2 + 4 x^4 - x^6 + 2 x^2 y - 4 x^4 y + x^6 y) \right\}$$



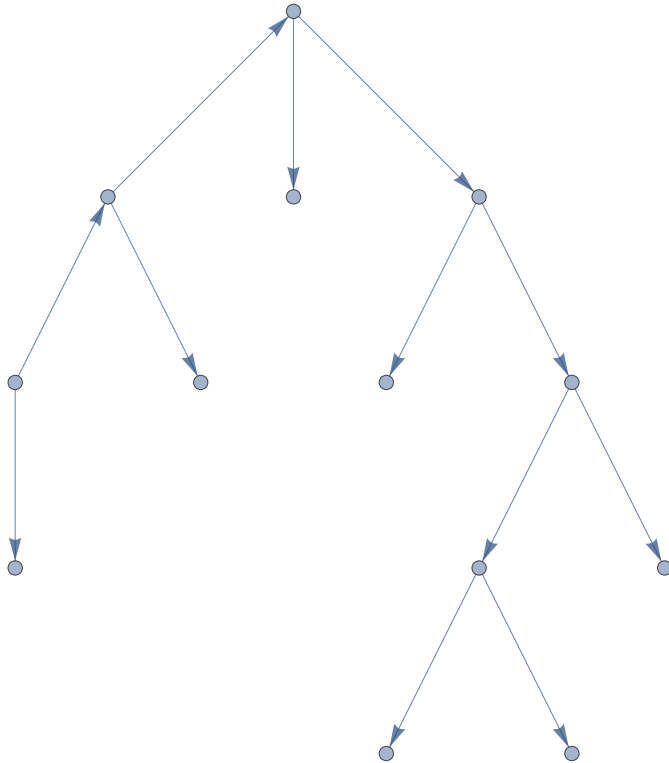
Out[643]=



$$\text{Out[645]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

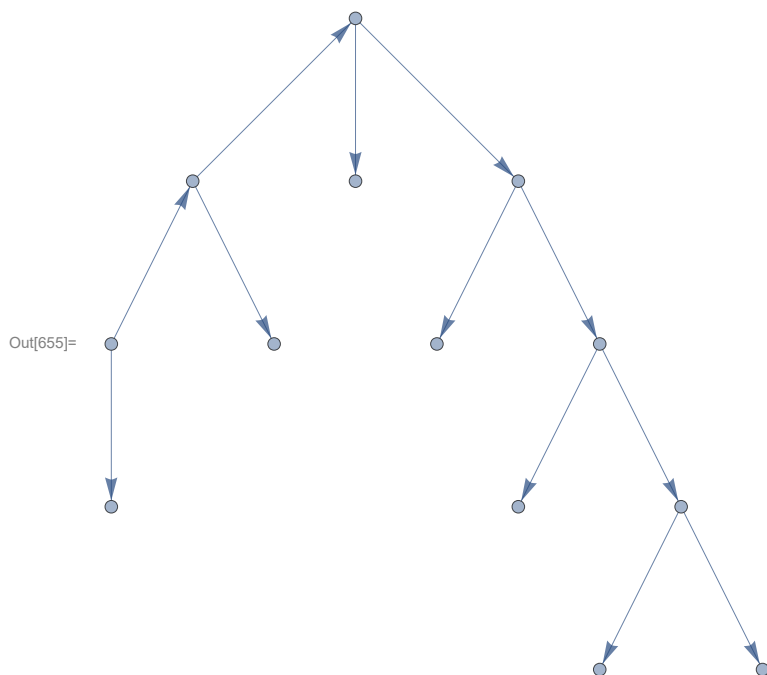
$$\text{Out[647]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$

Out[649]=



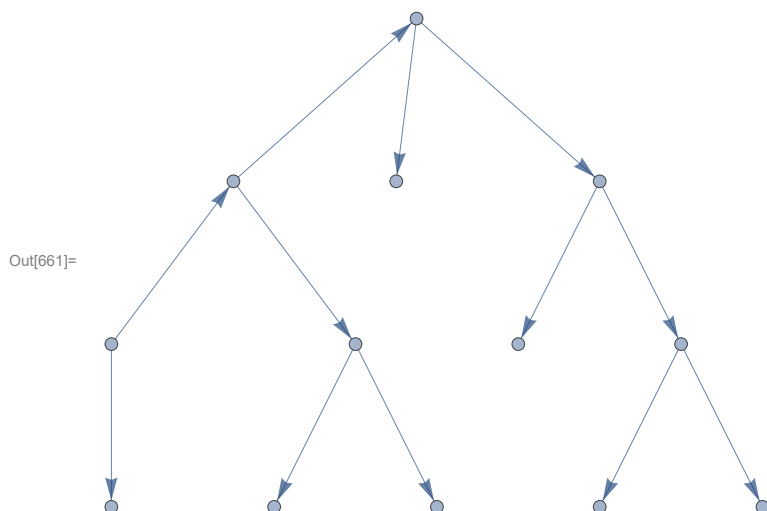
$$\text{Out[651]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G (-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[653]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + \right. \\ \left. F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F (1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



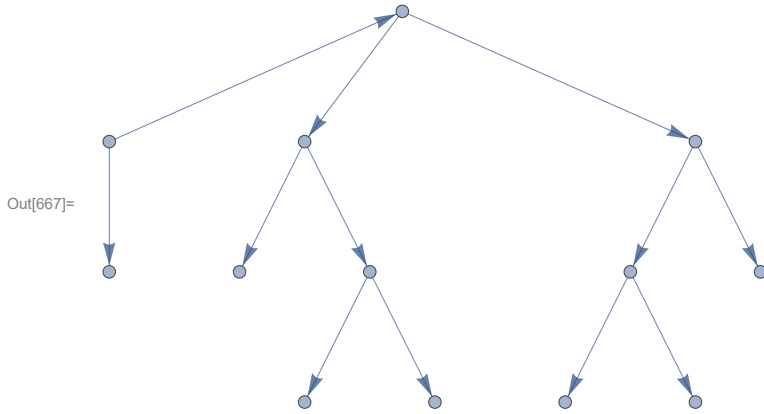
$$\text{Out[657]} = \left\{ -x^2 + x^4 + G(2x - 3x^3 + 3x^5) + G^2(-1 + 2x^2 - 6x^4 + 3x^6) + G^3(3x^3 - 3x^5 + x^7) \right\}$$

$$\text{Out[659]} = \left\{ x^2 - x^4 + x^4 y + F(-2x + 3x^3 - 3x^5 - 3x^3 y + 3x^5 y) + \right. \\ \left. F^2(1 - 2x^2 + 6x^4 - 3x^6 + 3x^2 y - 6x^4 y + 3x^6 y) + F^3(-3x^3 + 3x^5 - x^7 - xy + 3x^3 y - 3x^5 y + x^7 y) \right\}$$



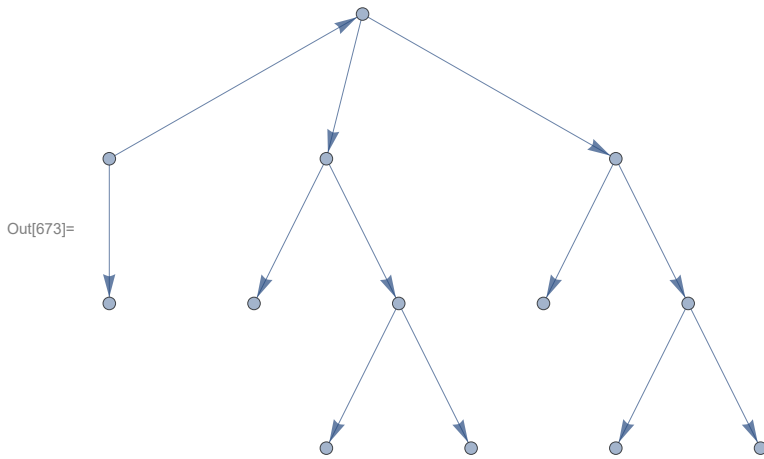
$$\text{Out[663]} = \left\{ -x + x^3 + G(1 - 2x^2 + 2x^4) + G^2(-2x^3 + 2x^5) + G^3(-x^4 + x^6) \right\}$$

$$\text{Out[665]} = \left\{ x - x^3 + x^3 y + F(-1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y) + \right. \\ \left. F^2(2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y) + F^3(x^4 - x^6 - x^4 y + x^6 y) \right\}$$



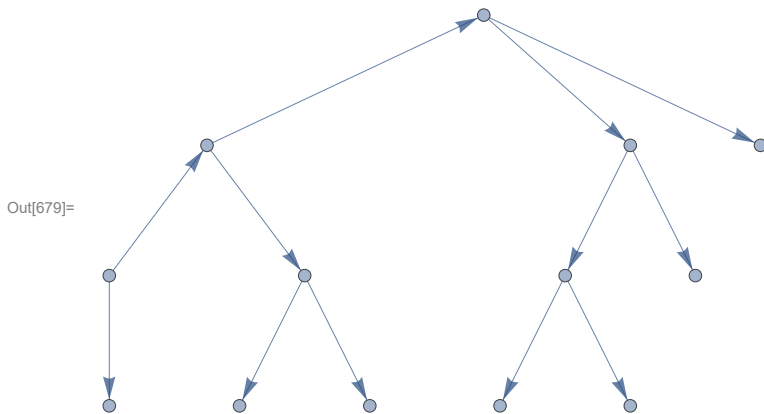
$$\text{Out[669]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G(-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[671]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F(1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



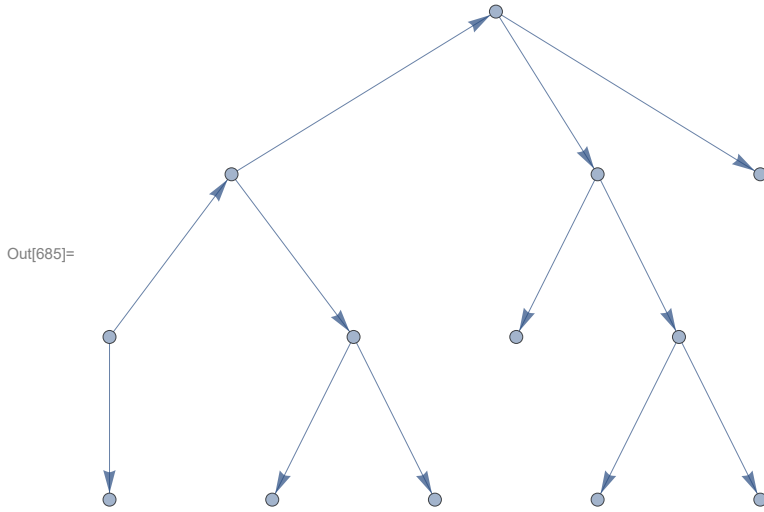
$$\text{Out[675]} = \left\{ -x + x^3 + G(1 - 2x^2 + 2x^4) + G^2(-2x^3 + 2x^5) + G^3(-x^4 + x^6) \right\}$$

$$\text{Out[677]} = \left\{ x - x^3 + x^3 y + F(-1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y) + F^2(2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y) + F^3(x^4 - x^6 - x^4 y + x^6 y) \right\}$$



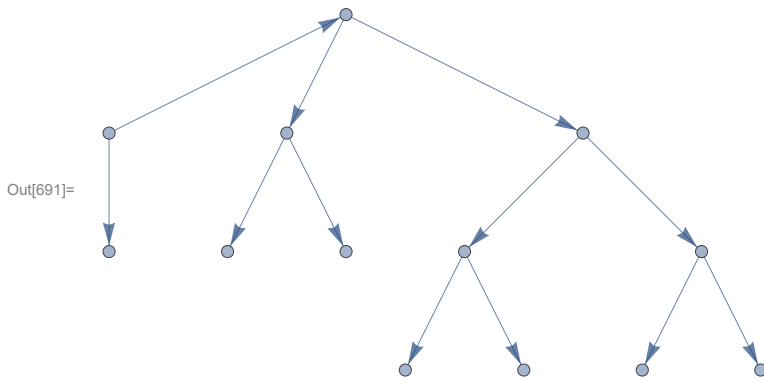
$$\text{Out[681]} = \left\{ -2G^3 x^3 - x^4 + x^6 + G^2(1 - 3x^2 + 5x^4) + G(-x + 3x^3 - 4x^5) \right\}$$

$$\text{Out[683]} = \left\{ x^4 - x^6 - x^4 y + x^6 y + F^3(2x^3 + xy - 2x^3 y) + F^2(-1 + 3x^2 - 5x^4 - 3x^2 y + 5x^4 y) + F(x - 3x^3 + 4x^5 + 3x^3 y - 4x^5 y) \right\}$$



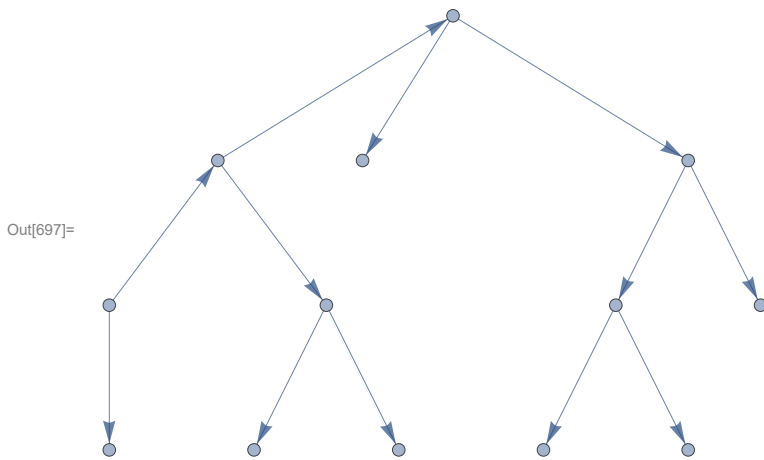
$$\text{Out[687]} = \left\{ x - x^3 + x^5 + G^2 (3x^3 - 2x^5) + G(-1 + 2x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[689]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^2 (-3x^3 + 2x^5 - xy + 3x^3 y - 2x^5 y) + F(1 - 2x^2 + 4x^4 - x^6 + 2x^2 y - 4x^4 y + x^6 y) \right\}$$



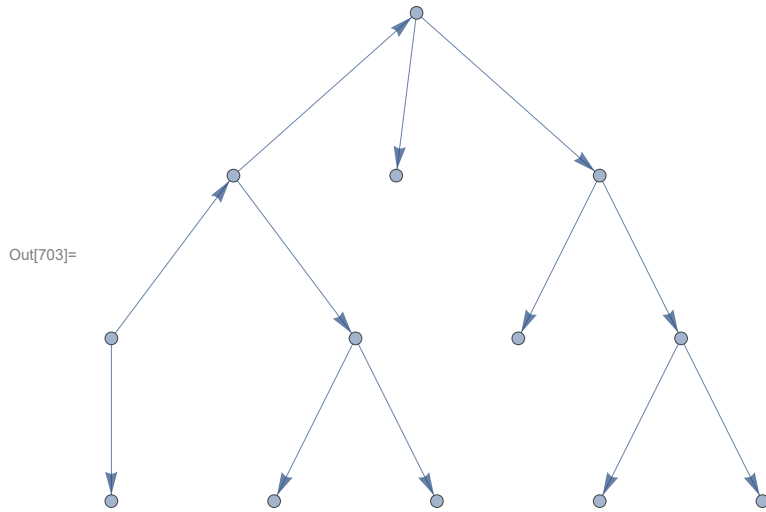
$$\text{Out[693]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 (2x^3 - 2x^5) + G(-1 + 2x^2 - 3x^4 + x^6) \right\}$$

$$\text{Out[695]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 (-x^4 + x^4 y) + F^2 (-2x^3 + 2x^5 - xy + 2x^3 y - 2x^5 y) + F(1 - 2x^2 + 3x^4 - x^6 + 2x^2 y - 3x^4 y + x^6 y) \right\}$$



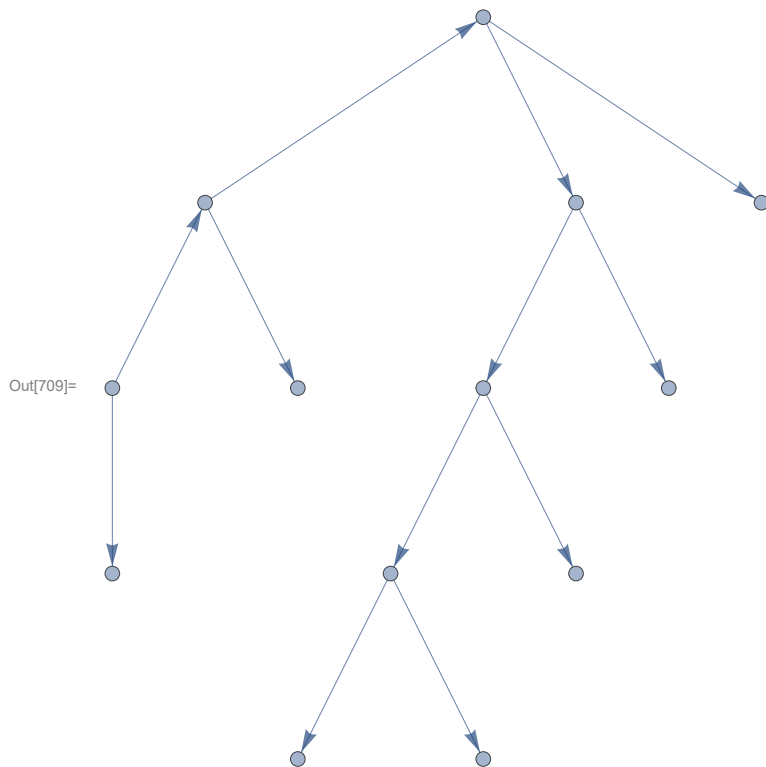
$$\text{Out[699]} = \left\{ -x + x^3 - x^7 + x^9 + G^3 (-x^4 - 2x^6) + G^2 (-x^3 + 5x^7) + G(1 - 2x^2 + x^4 + 2x^6 - 4x^8) \right\}$$

$$\text{Out[701]} = \left\{ -x + x^3 - x^7 + x^9 - x^3 y + 2 x^7 y - 2 x^9 y - x^7 y^2 + x^9 y^2 + F^3 \left( -x^4 - 2 x^6 + 4 x^6 y + x^4 y^2 - 2 x^6 y^2 \right) + \right. \\ \left. F^2 \left( -x^3 + 5 x^7 - x y + x^3 y + 3 x^5 y - 10 x^7 y - 3 x^5 y^2 + 5 x^7 y^2 \right) + \right. \\ \left. F \left( 1 - 2 x^2 + x^4 + 2 x^6 - 4 x^8 + 2 x^2 y - x^4 y - 5 x^6 y + 8 x^8 y + 3 x^6 y^2 - 4 x^8 y^2 \right) \right\}$$



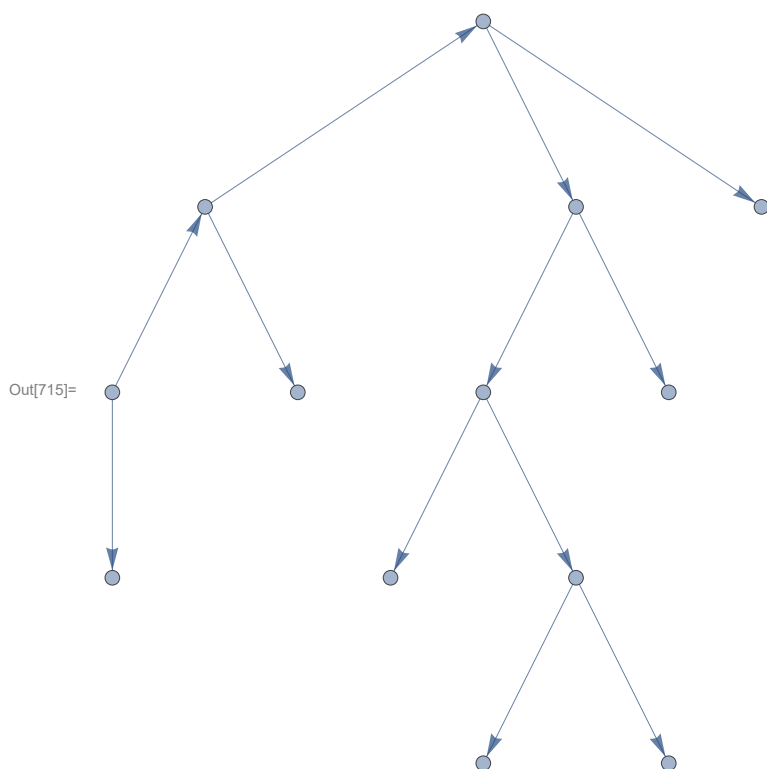
$$\text{Out[705]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2 x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[707]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2 x^2 - x^4 - 2 x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + x y - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



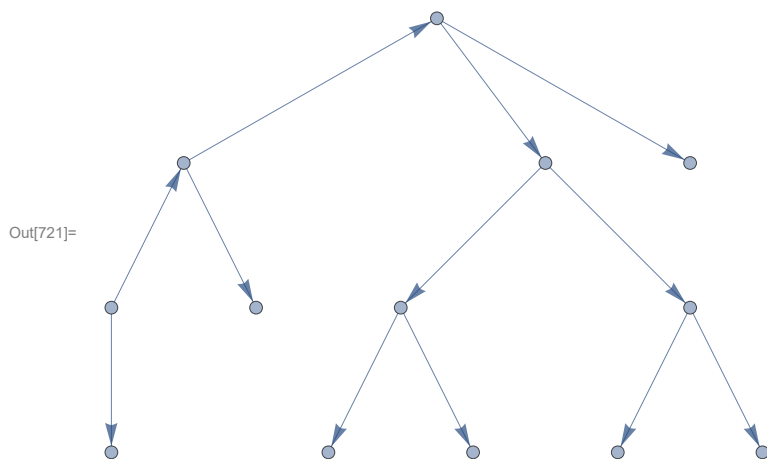
$$\text{Out[711]} = \left\{ -G^4 x^3 + x^5 + G^3 \left( 1 - 4 x^2 + 3 x^4 \right) + G^2 \left( -x + 6 x^3 - 3 x^5 \right) + G \left( -4 x^4 + x^6 \right) \right\}$$

$$\text{Out[713]} = \left\{ -x^5 + x^5 y + F^4 \left( x^3 + x y - x^3 y \right) + F^3 \left( -1 + 4 x^2 - 3 x^4 - 4 x^2 y + 3 x^4 y \right) + \right. \\ \left. F^2 \left( x - 6 x^3 + 3 x^5 + 6 x^3 y - 3 x^5 y \right) + F \left( 4 x^4 - x^6 - 4 x^4 y + x^6 y \right) \right\}$$



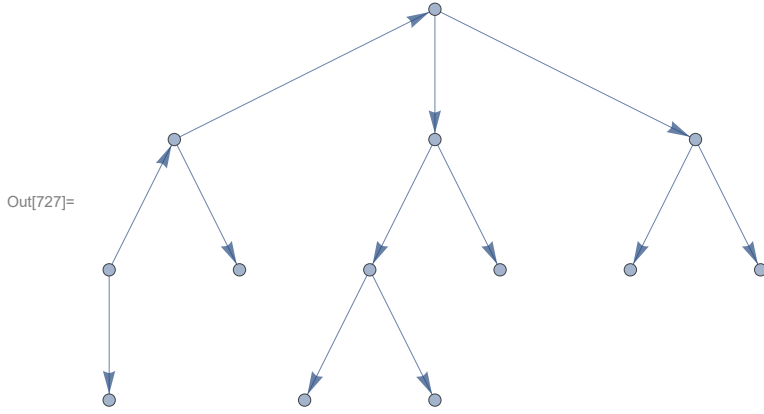
$$\text{Out[717]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[719]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



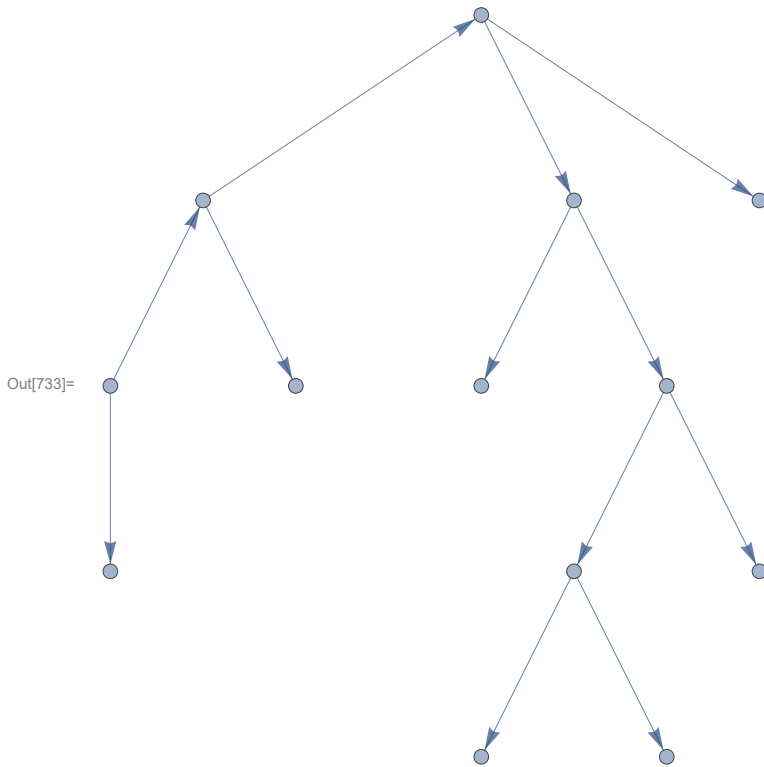
$$\text{Out[723]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G(x - 3x^3 + 2x^5) + G^2(-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[725]} = \left\{ -x^4 + x^4 y + F^3(-2x^3 + x^5 - xy + 2x^3 y - x^5 y) + \right. \\ \left. F(-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2(1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



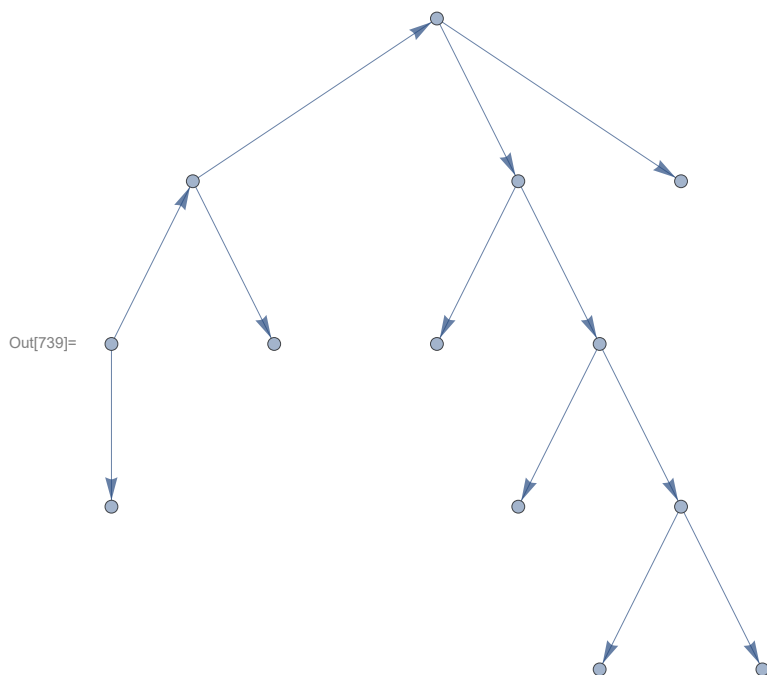
$$\text{Out[729]} = \left\{ x^4 + G^4 x^4 + G^3 (x^3 - 2x^5) + G (x - 3x^3 + x^5) + G^2 (-1 + 3x^2 - 2x^4 + x^6) \right\}$$

$$\text{Out[731]} = \left\{ -x^4 + x^4 y + F^4 (-x^4 + x^4 y) + F^3 (-x^3 + 2x^5 - x y + x^3 y - 2x^5 y) + \right. \\ \left. F (-x + 3x^3 - x^5 - 3x^3 y + x^5 y) + F^2 (1 - 3x^2 + 2x^4 - x^6 + 3x^2 y - 2x^4 y + x^6 y) \right\}$$



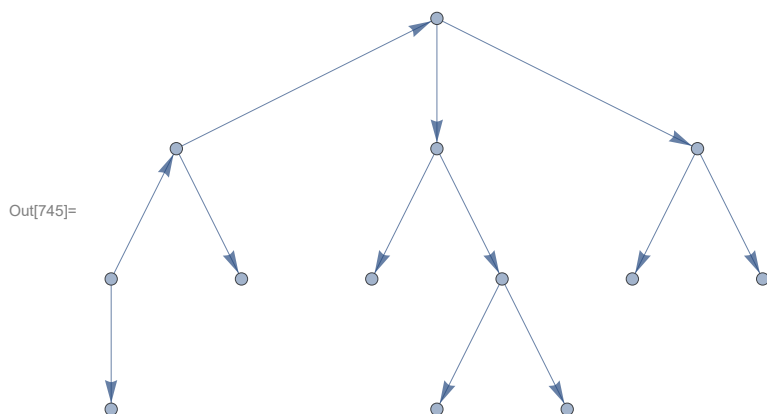
$$\text{Out[735]} = \left\{ x^4 + G^3 (2x^3 - x^5) + G (x - 3x^3 + 2x^5) + G^2 (-1 + 3x^2 - 4x^4 + x^6) \right\}$$

$$\text{Out[737]} = \left\{ -x^4 + x^4 y + F^3 (-2x^3 + x^5 - x y + 2x^3 y - x^5 y) + \right. \\ \left. F (-x + 3x^3 - 2x^5 - 3x^3 y + 2x^5 y) + F^2 (1 - 3x^2 + 4x^4 - x^6 + 3x^2 y - 4x^4 y + x^6 y) \right\}$$



$$\text{Out[741]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

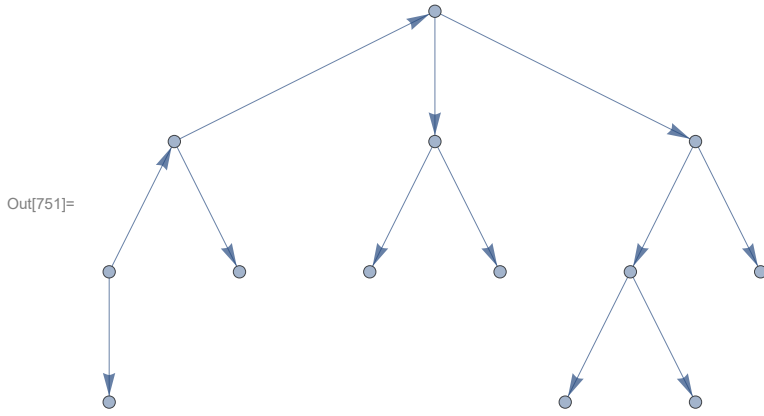
$$\text{Out[743]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[747]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

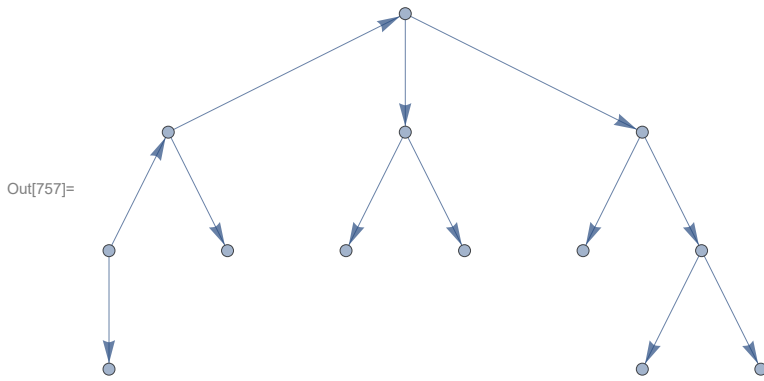
$$\text{Out[749]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$





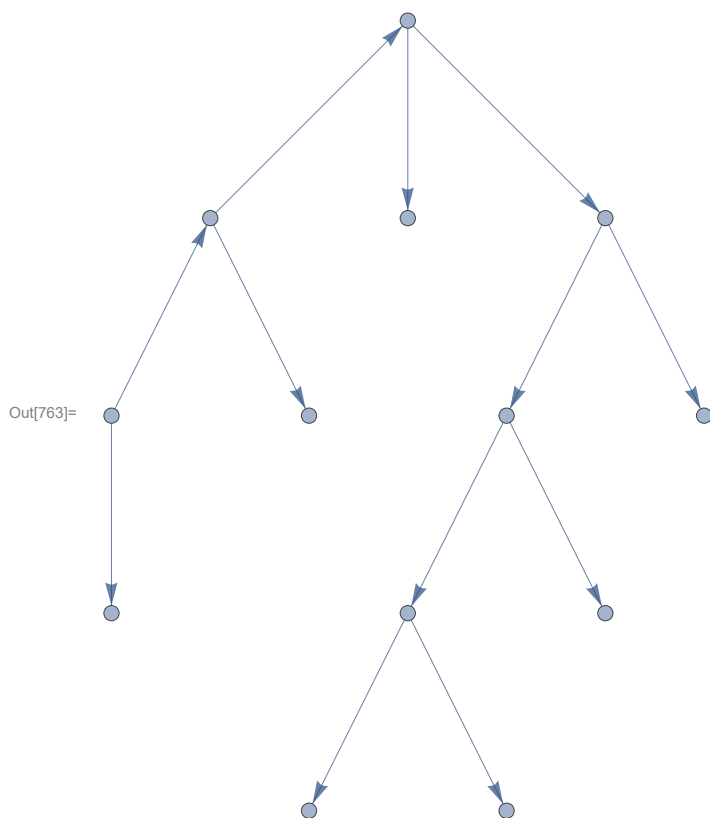
$$\text{Out[753]} = \left\{ x - x^3 + G^3 x^4 + x^5 + G^2 (2 x^3 - 2 x^5) + G (-1 + 2 x^2 - 3 x^4 + x^6) \right\}$$

$$\text{Out[755]} = \left\{ -x + x^3 - x^5 - x^3 y + x^5 y + F^3 (-x^4 + x^4 y) + F^2 (-2 x^3 + 2 x^5 - x y + 2 x^3 y - 2 x^5 y) + F (1 - 2 x^2 + 3 x^4 - x^6 + 2 x^2 y - 3 x^4 y + x^6 y) \right\}$$



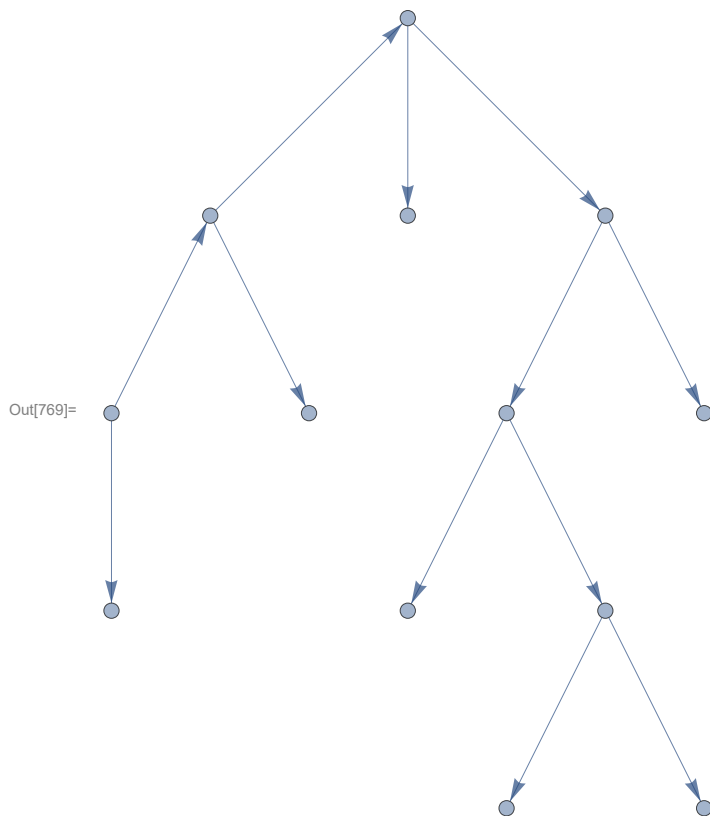
$$\text{Out[759]} = \left\{ -x + x^3 - G^4 x^5 + G (1 - 2 x^2 + x^4) + G^2 (-x^3 + x^5) + G^3 (-x^4 + x^6) \right\}$$

$$\text{Out[761]} = \left\{ x - x^3 + x^3 y + F (-1 + 2 x^2 - x^4 - 2 x^2 y + x^4 y) + F^4 (x^5 - x^5 y) + F^2 (x^3 - x^5 + x y - x^3 y + x^5 y) + F^3 (x^4 - x^6 - x^4 y + x^6 y) \right\}$$



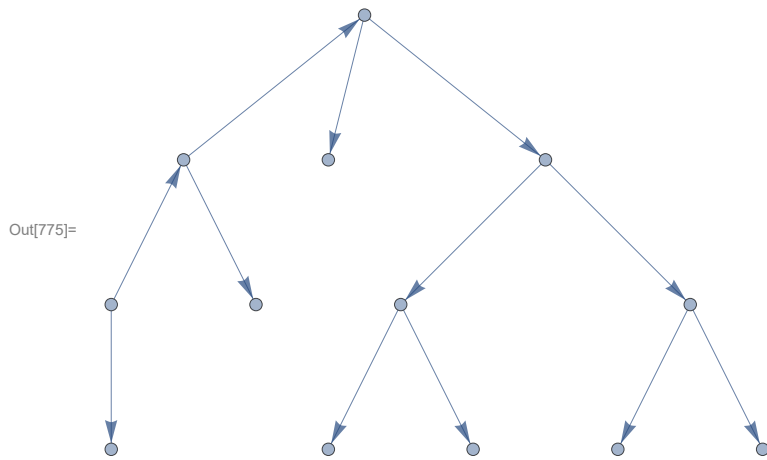
$$\text{Out[765]} = \left\{ x^4 + G^4 x^4 + G^3 (x^3 - 2x^5) + G (x - 3x^3 + x^5) + G^2 (-1 + 3x^2 - 2x^4 + x^6) \right\}$$

$$\text{Out[767]} = \left\{ -x^4 + x^4 y + F^4 (-x^4 + x^4 y) + F^3 (-x^3 + 2x^5 - x y + x^3 y - 2x^5 y) + \right. \\ \left. F (-x + 3x^3 - x^5 - 3x^3 y + x^5 y) + F^2 (1 - 3x^2 + 2x^4 - x^6 + 3x^2 y - 2x^4 y + x^6 y) \right\}$$



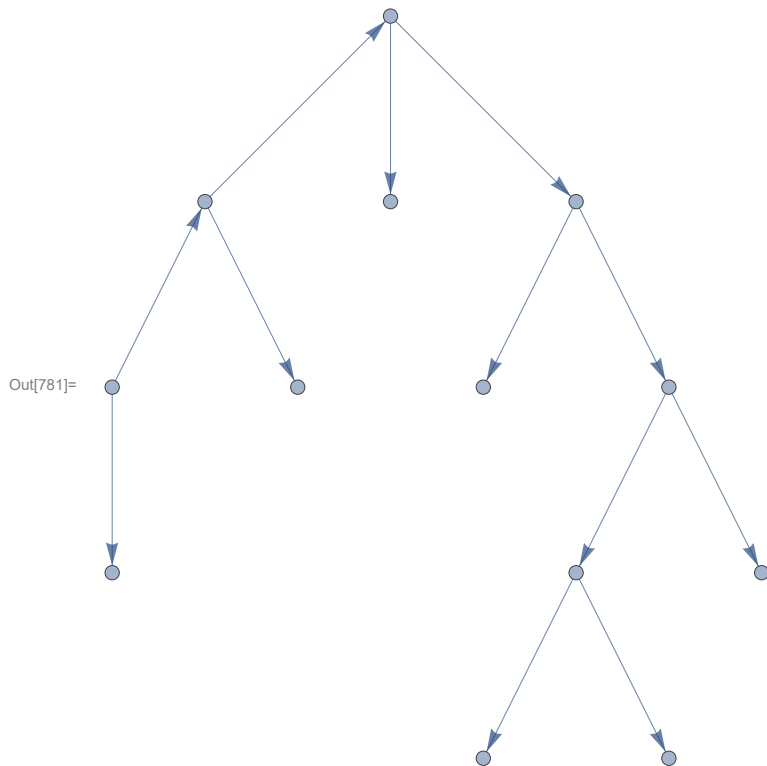
$$\text{Out[771]} = \left\{ -x + x^3 + G \left( 1 - 2x^2 + 2x^4 \right) + G^2 \left( -2x^3 + 2x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[773]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - 2x^4 - 2x^2 y + 2x^4 y \right) + \right. \\ \left. F^2 \left( 2x^3 - 2x^5 + xy - 2x^3 y + 2x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



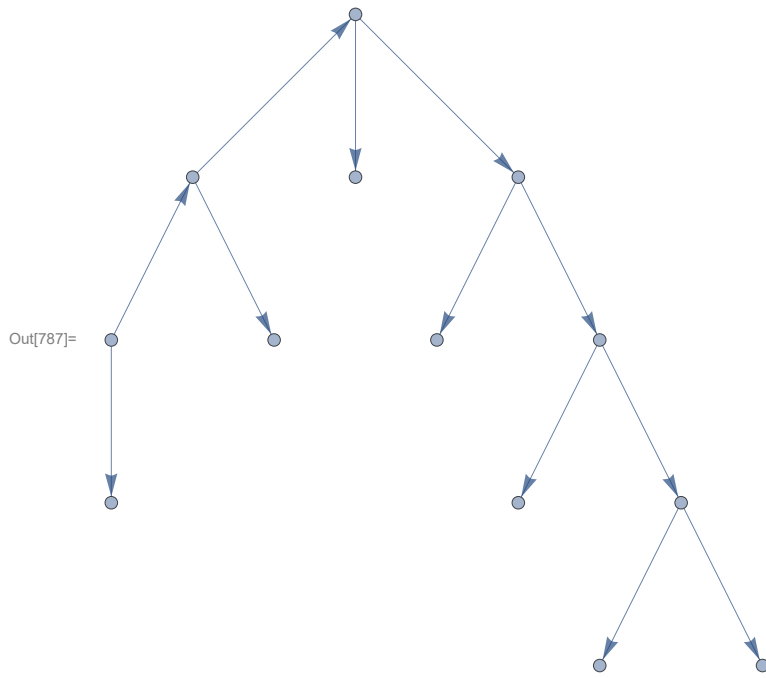
$$\text{Out[777]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[779]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + xy - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[783]} = \left\{ -x + x^3 - G^4 x^5 + G \left( 1 - 2x^2 + x^4 \right) + G^2 \left( -x^3 + x^5 \right) + G^3 \left( -x^4 + x^6 \right) \right\}$$

$$\text{Out[785]} = \left\{ x - x^3 + x^3 y + F \left( -1 + 2x^2 - x^4 - 2x^2 y + x^4 y \right) + \right. \\ \left. F^4 \left( x^5 - x^5 y \right) + F^2 \left( x^3 - x^5 + xy - x^3 y + x^5 y \right) + F^3 \left( x^4 - x^6 - x^4 y + x^6 y \right) \right\}$$



$$\text{Out[789]} = \left\{ x + G^2 x^3 + G^3 x^4 + G^4 x^5 + G^5 x^6 + G(-1 + x^2) \right\}$$

$$\text{Out[791]} = \left\{ -x + F(1 - x^2 + x^2 y) + F^2(-x^3 - x y + x^3 y) + F^3(-x^4 + x^4 y) + F^4(-x^5 + x^5 y) + F^5(-x^6 + x^6 y) \right\}$$