```
************************************************************************
Conclusion:
************************************************************************
There are no possible isotropy weights for multigraph # 1
There are no possible isotropy weights for multigraph # 2
There are no possible isotropy weights for multigraph # 3
There are no possible isotropy weights for multigraph # 4
There are no possible isotropy weights for multigraph # 5
There are no possible isotropy weights for multigraph # 6
There are no possible isotropy weights for multigraph # 7
There are no possible isotropy weights for multigraph # 8
There are no possible isotropy weights for multigraph # 9
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There are no possible isotropy weights for multigraph # 61
There are no possible isotropy weights for multigraph # 62
There are no possible isotropy weights for multigraph # 63
There are no possible isotropy weights for multigraph # 64
There are no possible isotropy weights for multigraph # 65
There are no possible isotropy weights for multigraph # 66
There are no possible isotropy weights for multigraph # 67
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All Possible Isotropy Weights for Multigraph #68:

There are at most 2 solutions:

$$\left\{\left\{b[1], \frac{b[1]}{2}+\frac{b[2]}{2}, b[2], \frac{b[1]}{2}+\frac{3\,b[2]}{2}\right\}, \left\{-b[1], -\frac{b[1]}{2}+\frac{b[2]}{2}, b[2], \frac{b[1]}{2}+\frac{3\,b[2]}{2}\right\}, \left\{\frac{b[1]}{2}-\frac{b[2]}{2}, \frac{b[1]}{2}+\frac{b[2]}{2}, -b[2], b[1]+b[2]\right\},\right.$$
$$\left.\left\{b[1], -\frac{b[1]}{2}-\frac{3\,b[2]}{2}, -\frac{b[1]}{2}-\frac{b[2]}{2}, \frac{b[1]}{2}+\frac{b[2]}{2}\right\}, \left\{-b[1], -\frac{b[1]}{2}-\frac{3\,b[2]}{2}, -\frac{b[1]}{2}-\frac{b[2]}{2}, -\frac{b[1]}{2}+\frac{b[2]}{2}\right\}, \left\{-b[1]-b[2], -\frac{b[1]}{2}-\frac{b[2]}{2}, \frac{b[1]}{2}-\frac{b[2]}{2}, -b[2]\right\}\right\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97

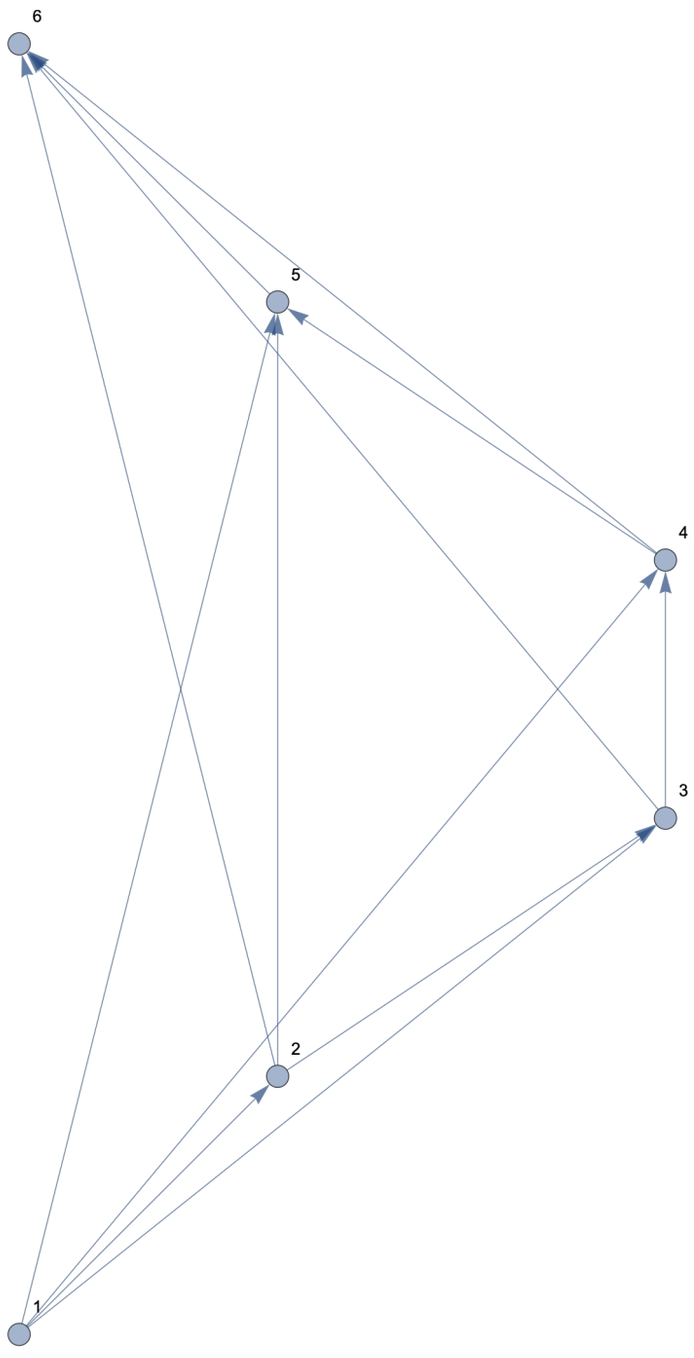
$$\left\{\left\{b[1], b[2], 2\,b[2], b[1]+b[2]\right\}, \left\{-b[1], b[2], -b[1]+b[2], b[1]+2\,b[2]\right\}, \left\{b[1]-b[2], -b[2], b[2], b[1]+2\,b[2]\right\},\right.$$
$$\left.\left\{b[1], -2\,b[2], -b[2], b[1]+b[2]\right\}, \left\{-b[1], -b[1]-2\,b[2], -b[1]-b[2], -b[1]+b[2]\right\}, \left\{-b[1]-2\,b[2], -b[1]-b[2], b[1]-b[2], -b[2]\right\}\right\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97



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There are no possible isotropy weights for multigraph # 69

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All Possible Isotropy Weights for Multigraph #70:

There are at most 6 solutions:

$$\left\{\left\{b[1], b[2], -b[1]+2\,b[2], -2\,b[1]+3\,b[2]\right\}, \left\{-b[1], -b[1]+b[2], -b[1]+2\,b[2], -2\,b[1]+3\,b[2]\right\}, \left\{b[1]-2\,b[2], -b[2], -b[1]+b[2], -2\,b[1]+2\,b[2]\right\},\right.$$
$$\left.\left\{b[1], 2\,b[1]-3\,b[2], b[1]-b[2], b[2]\right\}, \left\{-b[1], 2\,b[1]-3\,b[2], b[1]-b[2], -b[1]+b[2]\right\}, \left\{b[1]-2\,b[2], 2\,b[1]-2\,b[2], b[1]-b[2], -b[2]\right\}\right\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97

$$\left\{\left\{b[1], \frac{2\,b[1]}{3}+\frac{b[2]}{3}, \frac{b[1]}{3}+\frac{2\,b[2]}{3}, b[2]\right\}, \left\{-b[1], -\frac{b[1]}{3}+\frac{b[2]}{3}, \frac{b[1]}{3}+\frac{2\,b[2]}{3}, b[2]\right\},\right.$$
$$\left\{b[1], \frac{b[1]}{3}-\frac{b[2]}{3}, \frac{2\,b[1]}{3}+\frac{b[2]}{3}, -b[2]\right\}, \left\{-\frac{b[1]}{3}-\frac{2\,b[2]}{3}, -\frac{2\,b[1]}{3}-\frac{b[2]}{3}, -\frac{b[1]}{3}+\frac{b[2]}{3}, -\frac{2\,b[1]}{3}+\frac{2\,b[2]}{3}\right\},$$
$$\left.\left\{-b[1], \frac{b[1]}{3}-\frac{b[2]}{3}, -\frac{b[1]}{3}+\frac{b[2]}{3}, -b[2]\right\}, \left\{-\frac{b[1]}{3}-\frac{2\,b[2]}{3}, \frac{2\,b[1]}{3}-\frac{2\,b[2]}{3}, -\frac{2\,b[1]}{3}-\frac{b[2]}{3}, \frac{b[1]}{3}-\frac{b[2]}{3}\right\}\right\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97

$$\left\{\left\{b[1],\ \frac{b[1]}{2}+\frac{b[2]}{2},\ \frac{3\,b[1]}{2}+\frac{b[2]}{2},\ b[2]\right\},\ \left\{-b[1],\ -\frac{b[1]}{2}+\frac{b[2]}{2},\ \frac{b[1]}{2}+\frac{b[2]}{2},\ b[1]+b[2]\right\},\ \left\{b[1],\ \frac{b[1]}{2}-\frac{b[2]}{2},\ \frac{3\,b[1]}{2}+\frac{b[2]}{2},\ -b[2]\right\},\right.$$
$$\left.\left\{-\frac{3\,b[1]}{2}-\frac{b[2]}{2},\ -\frac{b[1]}{2}-\frac{b[2]}{2},\ \frac{b[1]}{2}+\frac{b[2]}{2},\ b[2]\right\},\ \left\{-b[1],\ -b[1]-b[2],\ -\frac{b[1]}{2}-\frac{b[2]}{2},\ -\frac{b[1]}{2}+\frac{b[2]}{2}\right\},\ \left\{-\frac{3\,b[1]}{2}-\frac{b[2]}{2},\ -\frac{b[1]}{2}-\frac{b[2]}{2},\ \frac{b[1]}{2}-\frac{b[2]}{2},\ -b[2]\right\}\right\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97

$$\{\{b[1],\ b[2],\ -b[1]+b[2],\ -3\,b[1]+2\,b[2]\},\ \{-b[1],\ -2\,b[1]+b[2],\ -b[1]+b[2],\ -2\,b[1]+2\,b[2]\},\ \{b[1]-b[2],\ -b[2],\ -b[1]+b[2],\ -3\,b[1]+2\,b[2]\},$$
$$\{b[1],\ 3\,b[1]-2\,b[2],\ 2\,b[1]-b[2],\ b[2]\},\ \{-b[1],\ 2\,b[1]-2\,b[2],\ b[1]-b[2],\ -2\,b[1]+b[2]\},\ \{3\,b[1]-2\,b[2],\ b[1]-b[2],\ 2\,b[1]-b[2],\ -b[2]\}\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97

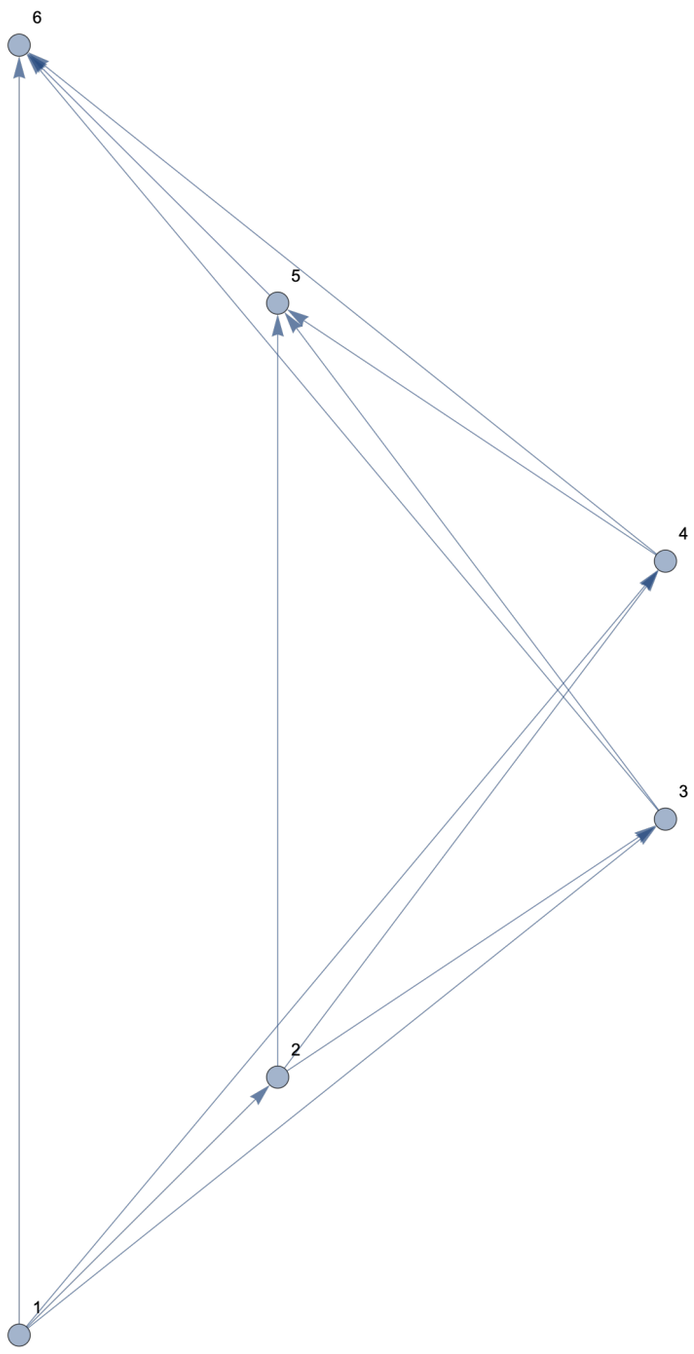
$$\{\{b[1],\ 2\,b[1],\ b[2],\ b[1]+b[2]\},\ \{-b[1],\ b[1],\ -b[1]+b[2],\ 2\,b[1]+b[2]\},\ \{b[1],\ b[1]-b[2],\ -b[2],\ 2\,b[1]+b[2]\},$$
$$\{-2\,b[1],\ -b[1],\ b[2],\ b[1]+b[2]\},\ \{-b[1],\ -2\,b[1]-b[2],\ -b[1]-b[2],\ -b[1]+b[2]\},\ \{-2\,b[1]-b[2],\ -b[1]-b[2],\ b[1]-b[2],\ -b[2]\}\}$$

Chern numbers:

c_1^4= 405

c_1^2c_2= 198

c_2^2= 97



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There are no possible isotropy weights for multigraph # 71

There are no possible isotropy weights for multigraph # 72

There are no possible isotropy weights for multigraph # 73

There are no possible isotropy weights for multigraph # 74

There are no possible isotropy weights for multigraph # 75

There are no possible isotropy weights for multigraph # 76

There are no possible isotropy weights for multigraph # 77

There are no possible isotropy weights for multigraph # 78