

$$In[*]:= \text{conedeletionthreshold}\left[\begin{pmatrix} 0 & 1 & -1 & 0 & -1 & 1 & 0 & 1 \\ 1 & 0 & -1 & 0 & -1 & 1 & 0 & 1 \\ -1 & -1 & 0 & 0 & -1 & 1 & 0 & 1 \\ 0 & 0 & 0 & 0 & -1 & 1 & 0 & 1 \\ -1 & -1 & -1 & -1 & 0 & 1 & 0 & 1 \\ 1 & 1 & 1 & 1 & 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 0 \end{pmatrix}, \lambda, u, \text{"even"}\right]$$

$$Out[*]= (-3 + \lambda) (-1 + \lambda) (424 u + 80 u^2 - 440 \lambda - 650 u \lambda - 36 u^2 \lambda + 618 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 345 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)$$

**In[\*]:= conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, u, "even"]**  
**conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, u, "odd"]**  
**conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, 0, "even"]**  
**conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, 0, "odd"]**

$$Out[*]= (-3 + \lambda) (-1 + \lambda) (424 u + 80 u^2 - 440 \lambda - 650 u \lambda - 36 u^2 \lambda + 618 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 345 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)$$

$$Out[*]= (-3 + \lambda) (-1 + \lambda) (328 + 488 u + 80 u^2 - 792 \lambda - 666 u \lambda - 36 u^2 \lambda + 738 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 359 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)$$

$$Out[*]= (-3 + \lambda) (-2 + \lambda) (-1 + \lambda) \lambda (220 - 199 \lambda + 73 \lambda^2 - 13 \lambda^3 + \lambda^4)$$

$$Out[*]= (-3 + \lambda) (-1 + \lambda)^2 (-328 + 464 \lambda - 274 \lambda^2 + 85 \lambda^3 - 14 \lambda^4 + \lambda^5)$$

**In[\*]:= conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, u, "even"] //**  
**AbsoluteTiming**  
**inclexclambda[u][adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, u, "even"] //**  
**AbsoluteTiming**

$$Out[*]= \{0.003724, (-3 + \lambda) (-1 + \lambda) (424 u + 80 u^2 - 440 \lambda - 650 u \lambda - 36 u^2 \lambda + 618 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 345 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)\}$$

$$Out[*]= \{250.779, (-3 + \lambda) (-1 + \lambda) (424 u + 80 u^2 - 440 \lambda - 650 u \lambda - 36 u^2 \lambda + 618 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 345 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)\}$$

**In[\*]:= conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, u, "odd"] //**  
**AbsoluteTiming**  
**inclexclambda[u][adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, u, "odd"] //**  
**AbsoluteTiming**

$$Out[*]= \{0.008801, (-3 + \lambda) (-1 + \lambda) (328 + 488 u + 80 u^2 - 792 \lambda - 666 u \lambda - 36 u^2 \lambda + 738 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 359 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)\}$$

$$Out[*]= \{253.854, (-3 + \lambda) (-1 + \lambda) (328 + 488 u + 80 u^2 - 792 \lambda - 666 u \lambda - 36 u^2 \lambda + 738 \lambda^2 + 325 u \lambda^2 + 4 u^2 \lambda^2 - 359 \lambda^3 - 71 u \lambda^3 + 99 \lambda^4 + 6 u \lambda^4 - 15 \lambda^5 + \lambda^6)\}$$

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In[*]:= conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, 0, "even"] //
  AbsoluteTiming
inclexclambdaau[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, 0, "even"] //
  AbsoluteTiming
Out[*]:= {0.003399, (-3 + λ) (-2 + λ) (-1 + λ) λ (220 - 199 λ + 73 λ2 - 13 λ3 + λ4) }
Out[*]:= {245.85, (-3 + λ) (-2 + λ) (-1 + λ) λ (220 - 199 λ + 73 λ2 - 13 λ3 + λ4) }

In[*]:= conedeletionthreshold[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, 0, "odd"] //
  AbsoluteTiming
inclexclambdaau[adjsignedthreshold[{1, -1, 0, -1, 1, 0, 1}], λ, 0, "odd"] //
  AbsoluteTiming
Out[*]:= {0.007914, (-3 + λ) (-1 + λ)2 (-328 + 464 λ - 274 λ2 + 85 λ3 - 14 λ4 + λ5) }
Out[*]:= {246.949, (-3 + λ) (-1 + λ)2 (-328 + 464 λ - 274 λ2 + 85 λ3 - 14 λ4 + λ5) }

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