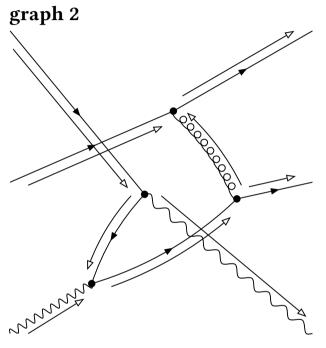
## graph 1

2 [Pdg { pdg: 1 }, Pdg { pdg: 1 }, Pdg

{ pdg: 22 }]

 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (2) and Spin Sum Sign(1)*Numerator Group Symmetry Grouping (2) and Spin Sum Sign(1)*Numerator Group Symmetry Grou$ 



2 [Pdg { pdg: 1 }, Pdg { pdg: 1 }, Pdg

{ pdg: 22 }]

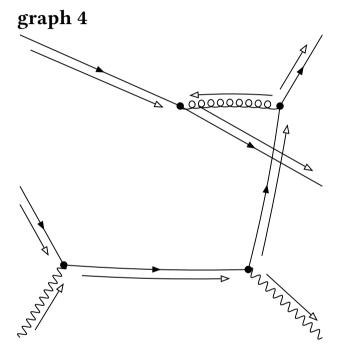
 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (4)$ 

## graph 3

 $2\ [\mbox{Pdg }\{\mbox{ pdg: }1\ \},\mbox{ Pdg }\{\mbox{ pdg: }1\ \},\mbox{ Pdg}$ 

{ pdg: 22 }]

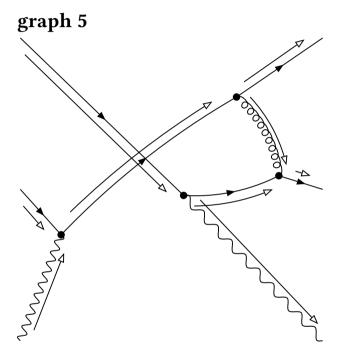
 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (2)$ 



2 [Pdg { pdg: 1 }, Pdg { pdg: 1 }, Pdg  $\$ 

{ pdg: 22 }]

 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (4)$ 



2 [Pdg { pdg: 1 }, Pdg { pdg: 1 }, Pdg  $\$ 

{ pdg: 22 }]

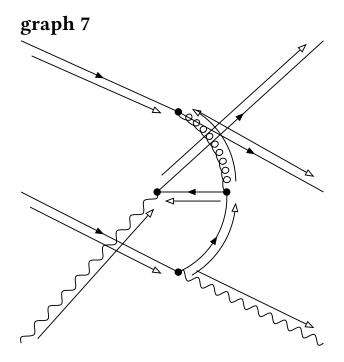
 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (4)$ 

## graph 6

2 [Pdg { pdg: 1 }, Pdg { pdg: 1 }, Pdg

{ pdg: 22 }]

 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (2)$ 



2 [Pdg { pdg: 1 }, Pdg { pdg: 1 }, Pdg  $\$ 

{ pdg: 22 }]

 $AutG(1)^-1*External Fermion 0 rdering Sign(-1)*AntiFermion Spin Sum Sign(1)*Numerator Independent Symmetry Grouping (2)$