

$$\left| \begin{array}{c} e^+ \\ e^- \end{array} \right\rangle \left| \begin{array}{c} \bar{q} \\ q \end{array} \right\rangle \left| \begin{array}{c} \gamma/Z \end{array} \right| \left| \begin{array}{c} 2 \end{array} \right| + \left| \begin{array}{c} e^+ \\ e^- \end{array} \right\rangle \left| \begin{array}{c} \bar{q} \\ q \end{array} \right\rangle \left| \begin{array}{c} \gamma/Z \\ g \end{array} \right| \left| \begin{array}{c} 2 \end{array} \right| + 2 \operatorname{Re} \left(\left| \begin{array}{c} e^+ \\ e^- \end{array} \right\rangle \left| \begin{array}{c} \bar{q} \\ q \end{array} \right\rangle \left| \begin{array}{c} \gamma/Z \end{array} \right| \left| \begin{array}{c} \gamma/Z \end{array} \right| \right)$$

The image displays a mathematical expression for a cross-section calculation, involving three Feynman diagrams and a real part term. The diagrams are enclosed in vertical bars, and the final term is enclosed in large parentheses.

- Diagram 1 (Left):** An electron-positron pair (e^+ and e^-) annihilates into a virtual photon or Z boson (γ/Z), which then decays into a quark-antiquark pair (q and \bar{q}). The diagram is enclosed in vertical bars with a factor of 2 to the right.
- Diagram 2 (Middle):** An electron-positron pair (e^+ and e^-) annihilates into a virtual photon or Z boson (γ/Z), which then decays into a quark-antiquark pair (q and \bar{q}) and a gluon (g). The diagram is enclosed in vertical bars with a factor of 2 to the right.
- Diagram 3 (Right):** An electron-positron pair (e^+ and e^-) annihilates into a virtual photon or Z boson (γ/Z), which then decays into a quark-antiquark pair (q and \bar{q}) and a gluon (g). The diagram is enclosed in vertical bars with a factor of 2 to the right.
- Diagram 4 (Far Right):** An electron-positron pair (e^+ and e^-) annihilates into a virtual photon or Z boson (γ/Z), which then decays into a quark-antiquark pair (q and \bar{q}) and a gluon (g). The diagram is enclosed in vertical bars with a factor of 2 to the right.

The expression is summed with a real part term, $+ 2 \operatorname{Re}$, followed by a large parentheses containing the same four diagrams.