Single HEMG

$$fHEMGp1 := \left(\frac{1}{2\cdot w1}\right)\cdot\exp\left(\left(\frac{x - w3}{w1}\right) + \frac{w0^2}{2\cdot w1^2}\right)\cdot\operatorname{erfc}\left(\frac{1}{\sqrt{2}}\cdot\left(\left(\frac{x - w3}{w0}\right) + \left(\frac{w0}{w1}\right)\right)\right)$$

$$fHEMGp1 := \frac{e^{\frac{x - w3}{w1} + \frac{w0^2}{2\,w1^2}}\operatorname{erfc}\left(\frac{\sqrt{2}\left(\frac{x - w3}{w0} + \frac{w0}{w1}\right)}{2}\right)}{2\,w1} \tag{1.1}$$

$$dfHEMGp1 := diff(fHEMGp1, x)$$

$$dfHEMGp1 := \frac{e^{\frac{x - w3}{w1} + \frac{w0^2}{2\,w1^2}}\operatorname{erfc}\left(\frac{\sqrt{2}\left(\frac{x - w3}{w0} + \frac{w0}{w1}\right)}{2}\right)}{2\,w1^2} \tag{1.2}$$

$$- \frac{e^{\frac{x - w3}{w1} + \frac{w0^2}{2\,w1^2}}\, e^{-\frac{\left(\frac{x - w3}{w0} + \frac{w0}{w1}\right)^2}{2}}\sqrt{2}}{2\,w1\sqrt{\pi}\,w0}$$

$$mfHEMGp1 := solve(dfHEMGp1 = 0, x)$$

Warning, solutions may have been lost

$$mfHEMGp1 := (\,) \tag{1.3}$$

Additional HEMG

$$fHEMGp2 := \left(\frac{1}{2\cdot w2}\right)\cdot\exp\left(\left(\frac{w3 - x}{w2}\right) + \frac{w0^2}{2\cdot w2^2}\right)\cdot\operatorname{erf}\left(\frac{1}{\sqrt{2}}\cdot\left(\left(\frac{w3 - x}{w0}\right) + \left(\frac{w0}{w2}\right)\right)\right)$$

$$fHEMGp2 := \frac{e^{\frac{-x + w3}{w2} + \frac{w0^2}{2\,w2^2}}\operatorname{erf}\left(\frac{\sqrt{2}\left(\frac{-x + w3}{w0} + \frac{w0}{w2}\right)}{2}\right)}{2\,w2} \tag{2.1}$$

Combined HEMG

$$fHEMG := w4 \cdot \left(\frac{fHEMGp1}{2} + \frac{fHEMGp2}{2} \right) + w5$$

$$fHEMG := w4 \left(\frac{e^{\frac{x - w3}{w1} + \frac{w0^2}{2\,w1^2}} \operatorname{erfc}\left(\frac{\sqrt{2}\left(\frac{x - w3}{w0} + \frac{w0}{w1} \right)}{2} \right)}{4\,w1} + \frac{e^{\frac{-x + w3}{w2} + \frac{w0^2}{2\,w2^2}} \operatorname{erf}\left(\frac{\sqrt{2}\left(\frac{-x + w3}{w0} + \frac{w0}{w2} \right)}{2} \right)}{4\,w2} \right) + w5 \tag{3.1}$$

$$dfHEMGp := diff(fHEMG, x)$$

$$dfHEMGp := w4 \left(\frac{e^{\frac{x - w3}{w1} + \frac{w0^2}{2\,w1^2}} \operatorname{erfc}\left(\frac{\sqrt{2}\left(\frac{x - w3}{w0} + \frac{w0}{w1} \right)}{2} \right)}{4\,w1^2} - \frac{e^{\frac{x - w3}{w1} + \frac{w0^2}{2\,w1^2}} e^{-\frac{\left(\frac{x - w3}{w0} + \frac{w0}{w1} \right)^2}{2}} \sqrt{2}}{4\,w1\sqrt{\pi}\,w0} - \frac{e^{\frac{-x + w3}{w2} + \frac{w0^2}{2\,w2^2}} \operatorname{erf}\left(\frac{\sqrt{2}\left(\frac{-x + w3}{w0} + \frac{w0}{w2} \right)}{2} \right)}{4\,w2^2} - \frac{e^{\frac{-x + w3}{w2} + \frac{w0^2}{2\,w2^2}} e^{-\frac{\left(\frac{-x + w3}{w0} + \frac{w0}{w2} \right)^2}{2}} \sqrt{2}}{4\,w2\sqrt{\pi}\,w0} \right) \tag{3.2}$$

$$mfHEMGp := solve(dfHEMGp = 0, x)$$

Warning, solutions may have been lost

$$mfHEMGp := (\,) \tag{3.3}$$