

# Brillouin Function

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In [1]: var('y j')
        B(y) = (1 + 1/(2*j))*coth((1+1/(2*j))*y) - 1/(2*j)*coth(y/(2*j))

In [2]: C1(y) = B.subs(j==1/2)
        C2(y) = B.subs(j==3/2)
        C3(y) = B.subs(j==5/2)
        C4(y) = B.subs(j==7/2)

In [3]: plot(C1(y), 0, 5) + plot(C2(y), 0, 5) + plot(C3(y), 0, 5) + plot(C4(y), 0, 5)

Out [3]:
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