

1) $\frac{d}{dt} \int_{a(t)}^{b(t)} f(x) dx$
Leibniz's rule

2) $\frac{d}{dt} \int_{a(t)}^{b(t)} f(x) dx$
Leibniz's rule

3) $\frac{d}{dt} \int_{a(t)}^{b(t)} f(x) dx$
Leibniz's rule