F(x)= sinh^5xcosh^6

$F(x) = \sin^5 x \cos^6 x$

$F(x) = uv$

We will use the formula: $(uv)' = u'v + v'u$, where $u = \sin^5 x \quad v = \cos^6 x$

$u' = 5\sin^4 x \cos x \quad v' = -6\cos^5 x \sin x$

$F(x) = \sin^5 x \cos^6 x$

$F'(x) = 5\sin^4 x \cos x \cos^6 x - 6\cos^5 x \sin x sin^5 x = 5\sin^4 x \cos^6 x - 6\cos^5 x sin^6 x$