Hyperbolic Functions – Q3 [Practice/E](17/6/23)

If $x = sinhu$, write $sinh(4u)$ in terms of x

Solution

$sinh(4u) = 2\,sinh(2u)\,cosh(2u)$

$= 4sinhucoshu(cosh^2u + sinh^2u)$

$= 4x\sqrt{1+x^2}(1+2x^2)$