Find a polynomial expression that represents the area of the rectangle shown in the figure.


Area $=(2 x-3)(2 x+3) \quad$ definition of area as the product of the sides
$=(2 x)^{2}-(3)^{2} \quad$ difference of squares pattern applied
$=2^{2} x^{2}-9$ distribute the 2 in the exponent
$=4 x^{2}-9$ simplify

