A binomial in the form $a^3 + b^3$ can be factored as $(a + b)\left(a^2 - ab + b^2\right)$. The second factor in this answer is missing its middle term. Also, you can see this answer is wrong by multiplying out:

$(4x + 3)\left(16x^2 + 9\right) = 4x \cdot 16x^2 + 4x \cdot 9 + 3 \cdot 16x^2 +$
$3 \cdot 9 = 64x^3 + 36x + 48x^2 + 27$