

Correct. You can use the distributive property (in reverse) to write $x^2 + 3x$ as $x(x + 3)$ and to write $2x + 6$ as $2(x + 3)$. This gives $x(x + 3) + 2(x + 3)$. Notice that $(x + 3)$ appears twice. Use the distributive property again to factor out the $x + 3$: $(x + 2)(x + 3)$.