Distributive Property

The rectangle below measures 5 units by 12 units. In order to illustrate the distributive property, we drew a line that divides this large rectangle into smaller rectangles that measure 5 units by 10 units and one that measures 5 units by 2 units. If we substitute the correct values for a, b, and c we will have a model that illustrates the distributive property.

\[
\begin{align*}
a &= 5 \\
b &= 10 \\
c &= 2
\end{align*}
\]

\[
a (b + c) &= ab + ac \\
5 (10 + 2) &= 5 \times 10 + 5 \times 2 \\
60 &= 60
\]

The rectangle below measures 5 units by 12 units. Can you draw a line that divides this large rectangle into smaller rectangles that measure 5 units by 9 units and one that measures 5 units by 3 units. If you substitute the correct values for a, b and c, you will have a model that illustrates the distributive property. Prove it!

\[
a (b + c) = ab + ac
\]

The rectangle below measures 5 units by 12 units. Can you draw a line that divides this large rectangle into smaller rectangles that measure 5 units by 8 units and one that measures 5 units by 4 units. If you substitute the correct values for a, b and c, you will have a model that illustrates the distributive property. Prove it!

\[
a (b + c) = ab + ac
\]

Use these two rectangles to create your own models for the distributive property.