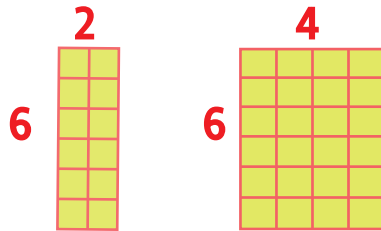
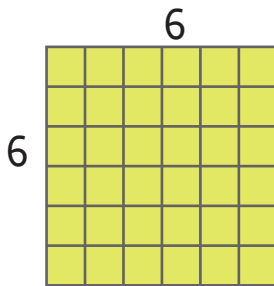


Array Break Apart:

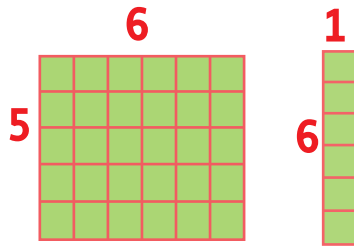
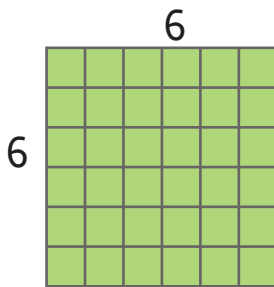
Breaking a multiplication problem into 2 or more parts can make the problem easier to solve. There is more than one correct way to break apart an array. Can you think of other ways to break apart the 6 X 6 array that are not pictured? Write the distributive property used underneath each new array set. The first one is done for you.



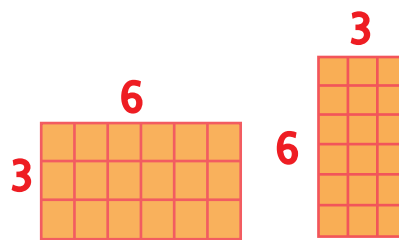
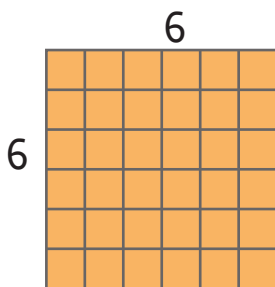
$$\begin{array}{r} \underline{2} \times \underline{6} = \underline{12} \\ + \\ \underline{6} \times \underline{4} = \underline{24} \\ \hline 6 \times 6 = \underline{36} \end{array}$$

Guess what? When you break apart arrays, you are using distributive property:

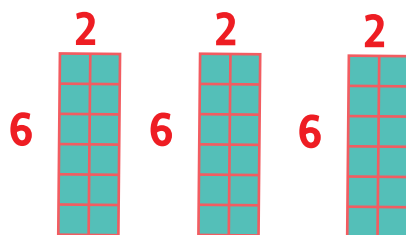
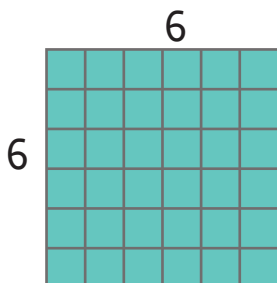
$$6 \times (2 + 4) = (6 \times 2) + (6 \times 4) = 36$$



$$\begin{array}{r} \underline{5} \times \underline{6} = \underline{30} \\ + \\ \underline{6} \times \underline{1} = \underline{6} \\ \hline 6 \times 6 = \underline{36} \end{array}$$



$$\begin{array}{r} \underline{3} \times \underline{6} = \underline{18} \\ + \\ \underline{6} \times \underline{3} = \underline{18} \\ \hline 6 \times 6 = \underline{36} \end{array}$$



$$\begin{array}{r} \underline{6} \times \underline{2} = \underline{12} \\ + \\ \underline{6} \times \underline{2} = \underline{12} \\ + \\ \underline{6} \times \underline{2} = \underline{12} \\ \hline 6 \times 6 = \underline{36} \end{array}$$