

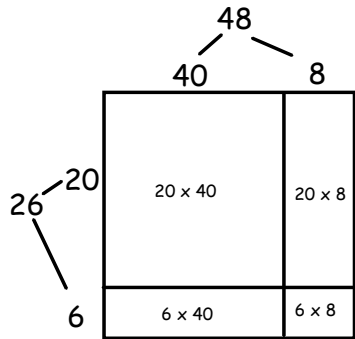
3 Multiplication Strategies

Name _____

Array Model with Partial Products

$$26 \times 48 =$$

Array Model



Equations

$$26 \times 48 =$$

$$(20 \times 40) + (20 \times 8) + (6 \times 40) + (6 \times 8) =$$

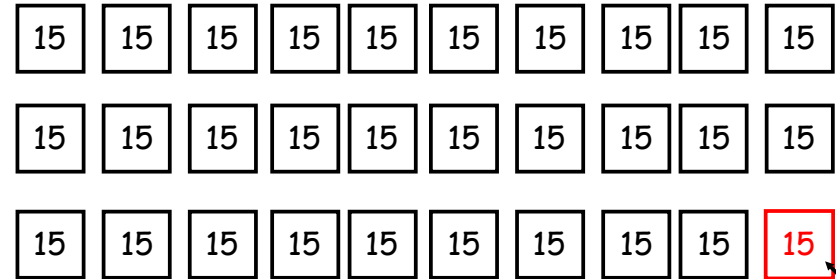
$$800 + 160 + 240 + 48 =$$

$$\begin{array}{r} 20 \times 40 = 800 \\ 20 \times 8 = 160 \\ 6 \times 40 = 240 \\ 6 \times 8 = 48 \\ \hline 1,248 \end{array}$$

Making an Easier Problem

$$29 \times 15 =$$

29 **groups of** 15



Think of 30 **groups of** 15 to make the problem easier

$$30 \times 15 =$$

$$3 \times 15 = 45$$

$$30 \times 15 = 450$$

$$450 - 15 = 435$$

This has an extra group of 15

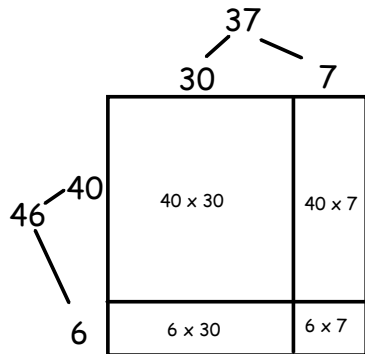
Now you have to subtract the extra group!

Add an extra group of 15

Using Vertical Partial Products

$$46 \times 37 =$$

Array Model



Remember to think about the **VALUE** of the digits that you are multiplying!!!

$$\begin{array}{r} 46 \\ \times 37 \\ \hline 42 \quad \leftarrow 7 \times 6 \\ 280 \quad \leftarrow 7 \times 40 \\ + 180 \quad \leftarrow 30 \times 6 \\ 1,200 \quad \leftarrow 30 \times 40 \\ \hline 1,702 \end{array}$$