

Multiplication

- Column Model - Big Numbers

Learning Goal:

By the end of this lesson I should be able to MULTIPLY double and triple digit positive numbers together using a COLUMN MODEL, WITHOUT the use of a calculator (technology).

It is important to remember that **MULTIPLICATION** is a shortcut for repetitive addition.

When we are asked to multiply numbers together, the final result is called the **PRODUCT**.

Product -> Multiply -> "Times"
(similar meaning)

Warning:

The Column Model is a very efficient way to solve multiplication problems but it requires a strong grasp of multiplication concepts.

It is **STRONGLY** recommended that use of the Area Model be mastered before continuing to this model.

Be Careful! There are some tricky parts!

Find the product of 12×45

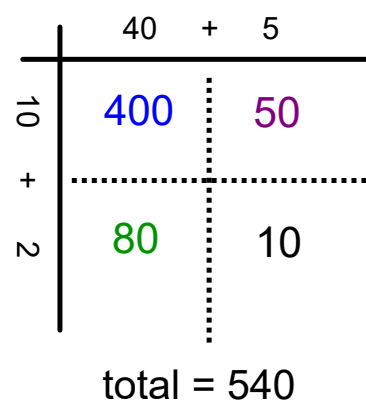
Column Model One

$$\begin{array}{r} 45 \\ \times 12 \\ \hline \end{array}$$

Column Model Two

$$\begin{array}{r} 45 \\ \times 12 \\ \hline \end{array}$$

Area Model - Friendly Numbers



Be Careful! There are some tricky parts!

Find the product of 125×24

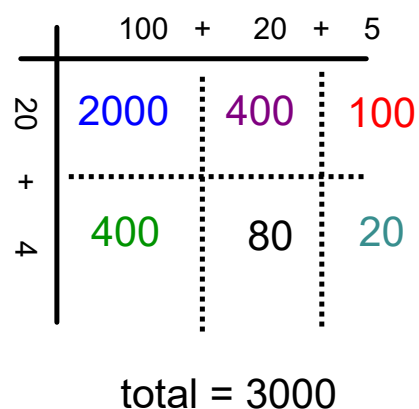
Column Model One

$$\begin{array}{r} 125 \\ \times 24 \\ \hline \end{array}$$

Column Model Two

$$\begin{array}{r} 125 \\ \times 24 \\ \hline \end{array}$$

Area Model - Friendly Numbers



Be Careful! There are some tricky parts!

Find the product of 435×124

Column Model One

$$\begin{array}{r} 435 \\ \times 124 \\ \hline \end{array}$$

Column Model Two

$$\begin{array}{r} 435 \\ \times 124 \\ \hline \end{array}$$

Area Model - Friendly Numbers

	400	+	30	+	5
100	40000		3000		500
+					
20	8000		600		100
+					
4	1600		120		20

total = 53940

Press PAUSE on the video and try the following
Find the PRODUCT for the following using the Column Model.

(a) $(28)(126)$

$$\begin{array}{r} 126 \\ \times 28 \\ \hline \end{array}$$

$$\begin{array}{r} .48 \\ 160 \\ 800 \\ 120 \\ 400 \\ + 2000 \\ \hline \end{array}$$

(b) $(120)(254)$

$$\begin{array}{r} + \quad 120 \\ \times 254 \\ \hline \end{array}$$

$$\begin{array}{r} 254 \\ \times 120 \\ \hline \end{array}$$

$$\begin{array}{r} .5080 \\ + 25400 \\ \hline 30480 \end{array}$$

Thank You for watching.

Please watch again and pause
where you may have had difficulties.

Good luck!