

Multiplication - pt 1

Learning Goal:

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

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

Example:

$$5+5+5+5+5+5$$

is the same as 5×6 or $(5)(6)$ or 6×5 or $(6)(5)$

This is read as "six groups of five".

*The order of the numbers does not change
the final product (result).*

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

Product -> Multiply -> "Times"

(similar meaning)

Area Model and Friendly Numbers

"Eight times three" can be represented by the following:

$$(3)(8) =$$

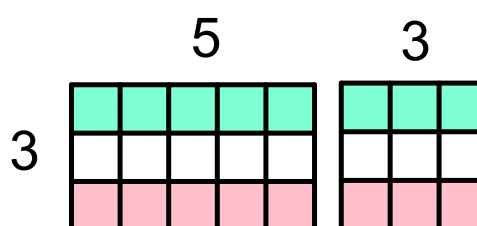

$$(3)(8)$$

$$= (3)(5+3)$$

$$= (3)(5) + (3)(3)$$

=

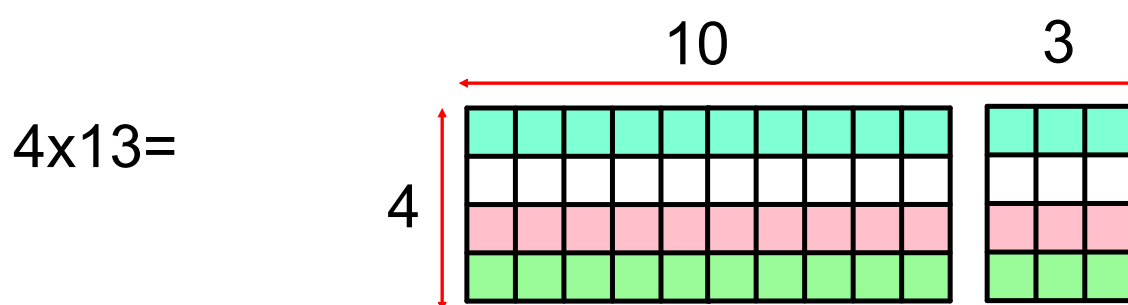
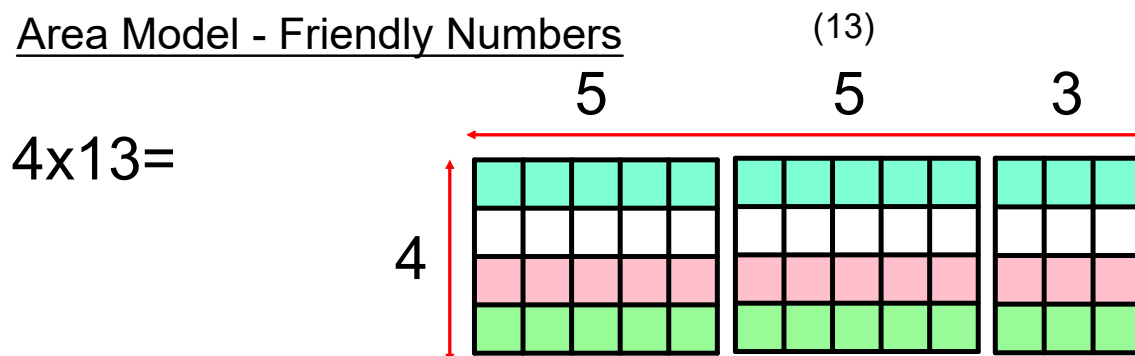
=



Calculate smaller areas, then add them up to determine the final product.

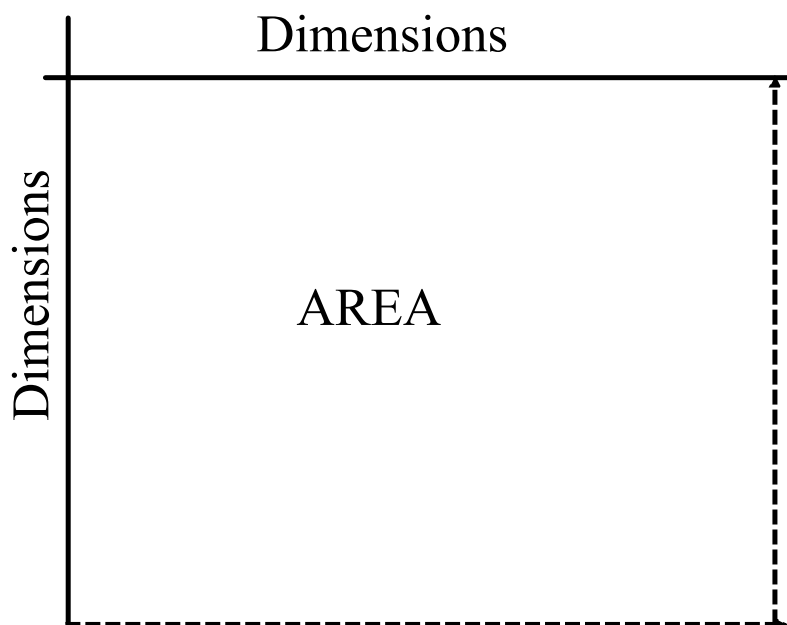
Find the product of 4×13

Area Model - Friendly Numbers



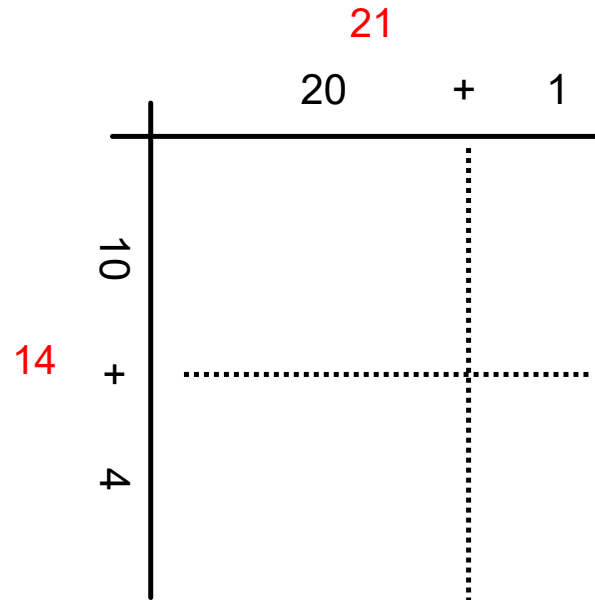
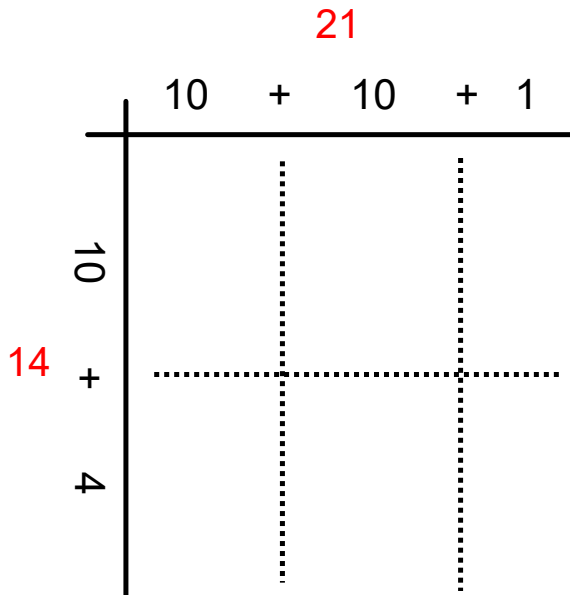
Calculate smaller areas, then add them up to determine the final product.

When using the Area Model, there are two regions;
Dimensions go on the outside of the rectangle,
Area is on the inside of the rectangle.



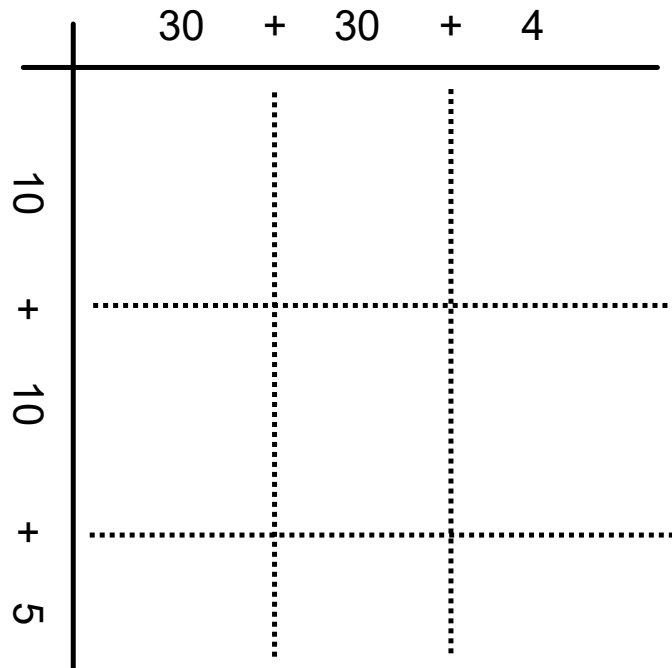
Find the product of 14×21

Area Model - Friendly Numbers



Find the product of 64×25

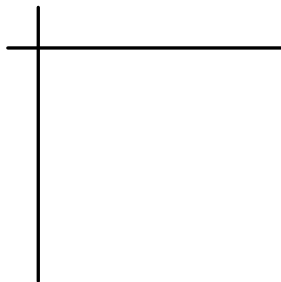
Area Model - Friendly Numbers



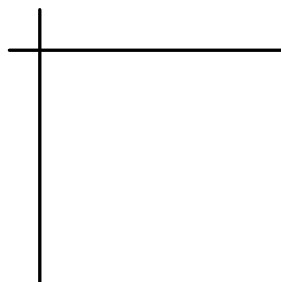
Press PAUSE on the video and try the following

Find the PRODUCT for the following using an area model:

(a) $(17)(14)$



(b) $(25)(24)$



Task 2.2