

26.01.21

WALT: Understand the grid method of multiplication

Vocabulary check

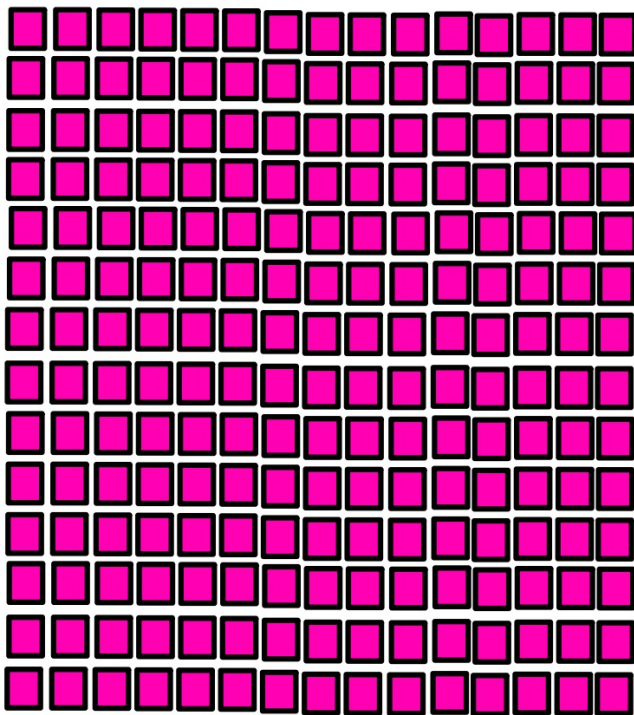
multiply
multiplicand
multiplier
product
place value
grid method
partitioning
distributive law

$$\begin{array}{r} 15 \\ \times 2 \\ \hline 30 \end{array}$$

multiplicand
multiplier
product

Thousands	Hundreds	Tens	Ones

What do these images show?

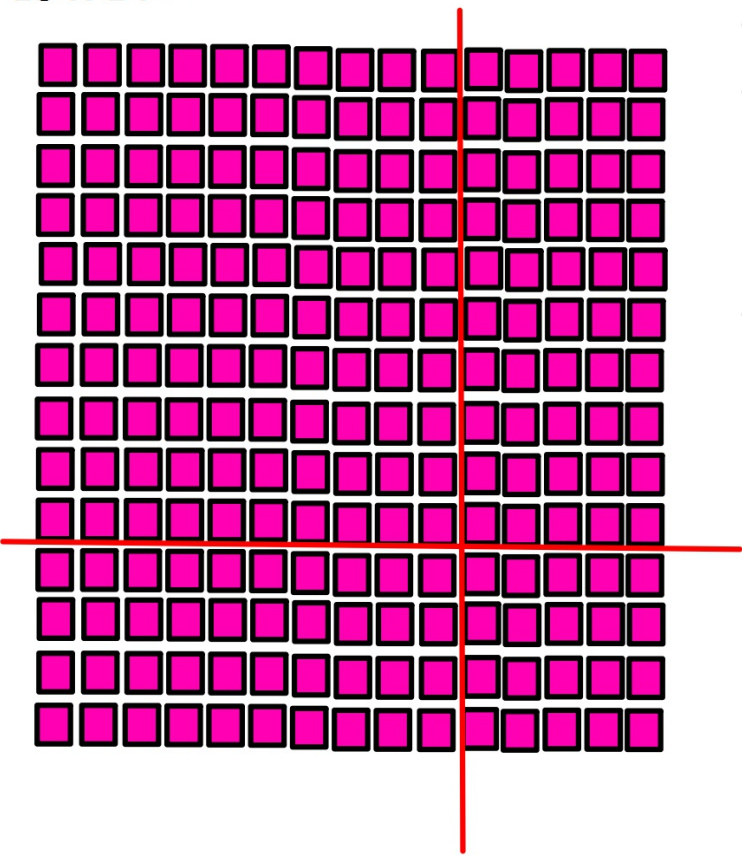


x	10	1	1	1	1	1
10	100	10	10	10	10	10
1	10	1	1	1	1	1
1	10	1	1	1	1	1
1	10	1	1	1	1	1
1	10	1	1	1	1	1

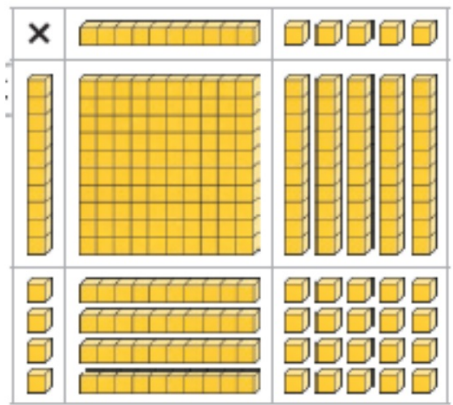
x		

What is the same and what is different?

15 x 14 =

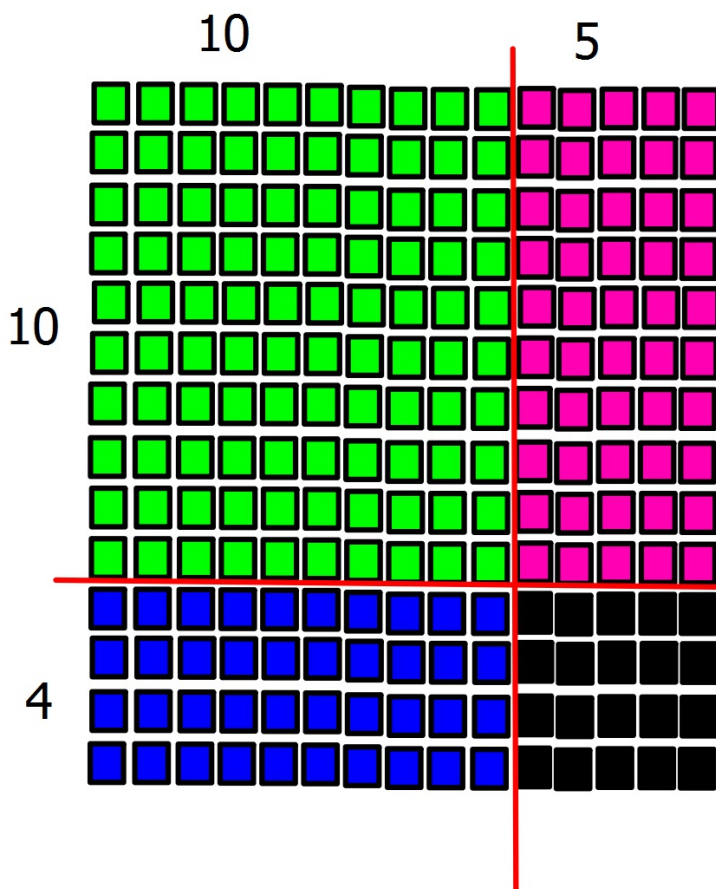


×	10	1	1	1	1	1
10	100	10	10	10	10	10
1	10	1	1	1	1	1
1	10	1	1	1	1	1
1	10	1	1	1	1	1
1	10	1	1	1	1	1



How does this link to the grid method?

$$15 \times 14 =$$



$$(10 \times 15) + (4 \times 15)$$

$$(10 \times 10) + (10 \times 5) + (4 \times 10) + (4 \times 5) =$$

×	10	5
10	100	50
4	40	20

What maths skills are we using?

10

5

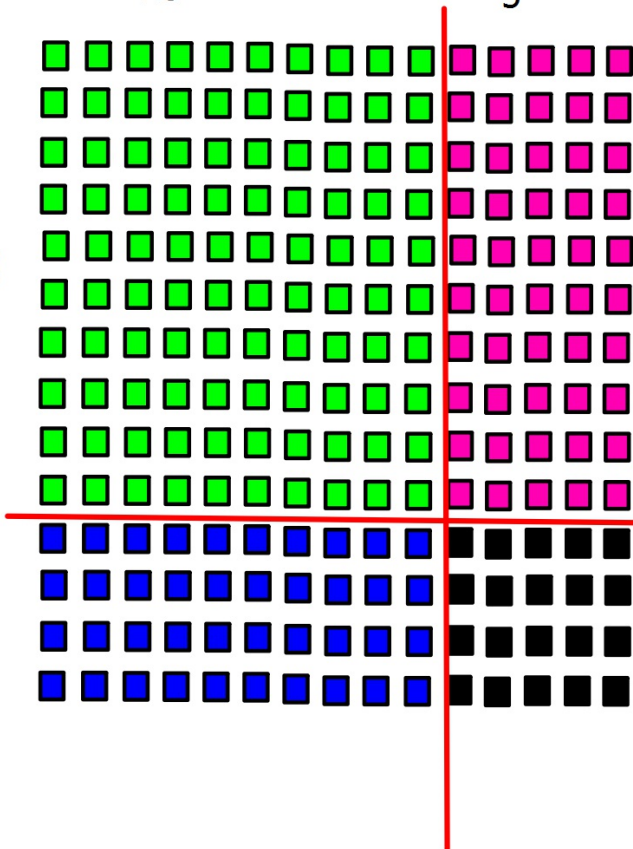
15 x 14 =

(10 x 15) + (4 x 15)

10

(10 x 10) + (10 x 5)

+ (4 x 10) + (4 x 5) =



x	10	5
10	100	50
4	40	20

(10 x 10)

(4 x 10)

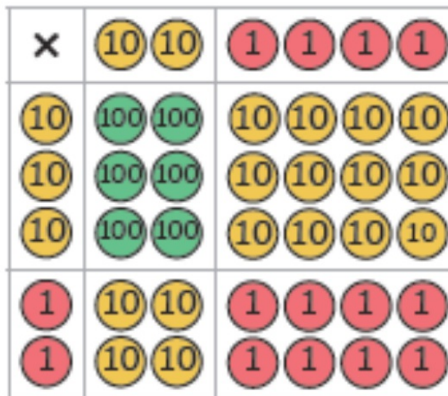
=

I do

$$24 \times 32 =$$

$$(24 \times 30) + (24 \times 2) =$$

$$(20 \times 30) + (4 \times 30) + (20 \times 2) + (4 \times 2) =$$



Would this be easy to represent as an array?

×	20	4
30		
2		

=

You do:

$25 \times 23 =$

x		

=

$36 \times 24 =$

$51 \times 42 =$

Hinge

Which of these is correct for $35 \times 24 =$

A

x	30	5	
20	60	10	70
4	6	20	6

= 76

B

x	30	5	
20	6	100	106
4	12	20	32

= 138

C

x	30	5	
20	600	100	700
4	120	20	140

= 840

D I'm not sure

Try it

1. $65 \times 47 =$

x	60	5
40		
7		

=

2. $82 \times 49 =$

x	80	2
40		
9		

=

3. $84 \times 53 =$

x		

=

4. $34 \times 93 =$

x		

=

5. $44 \times 23 =$

6. $36 \times 25 =$

7. $43 \times 43 =$

8. $33 \times 54 =$

Use it

What are the missing digits in these grid calculations? Write the calculation and the answer.

1.

X		2
70	2800	
5		10

___ x ___ = ___

2.

X	30	
	2700	90
9	270	9

___ x ___ = ___

3.

X		8
60		480
	240	64

___ x ___ = ___

Prove it

Eva says,



To multiply 23 by 57 I just need to calculate 20×50 and 3×7 and then add the totals.

What mistake has Eva made?
Explain your answer.