EYFS

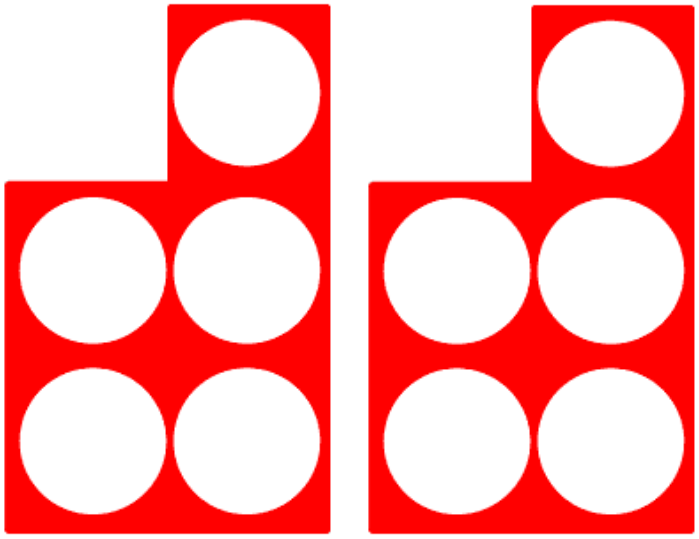
Multiplication

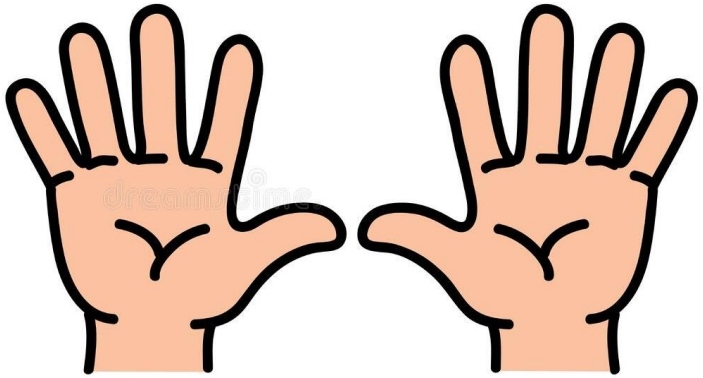
Stage

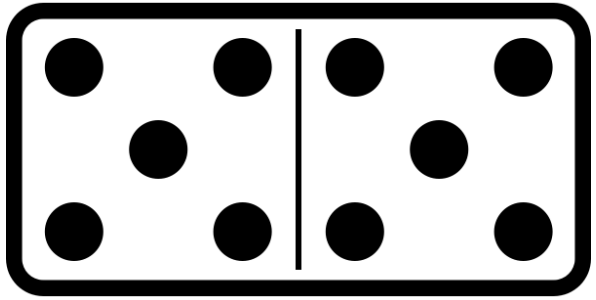
doubling.

Stage 1:

"Double 5 is 10."







KS1

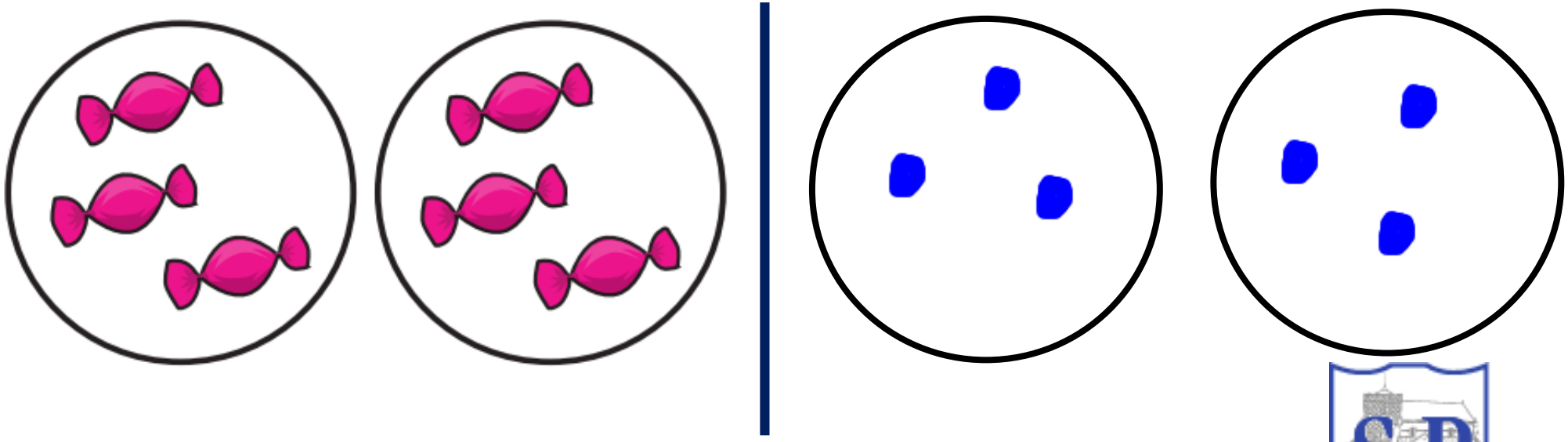
Multiplication

Stages

Stage 2:

making equal groups.

2 groups of 3

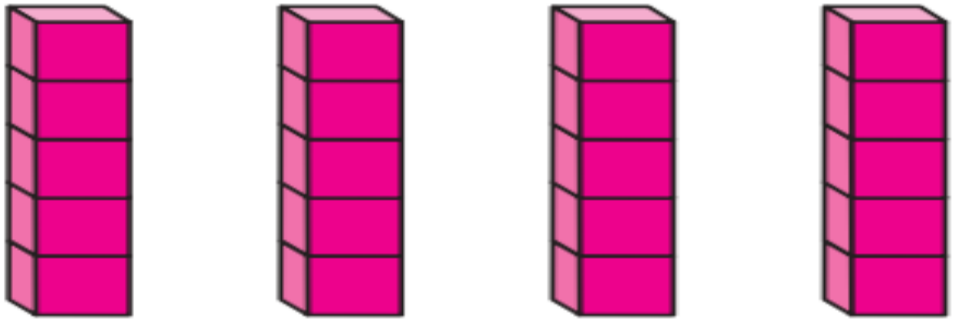


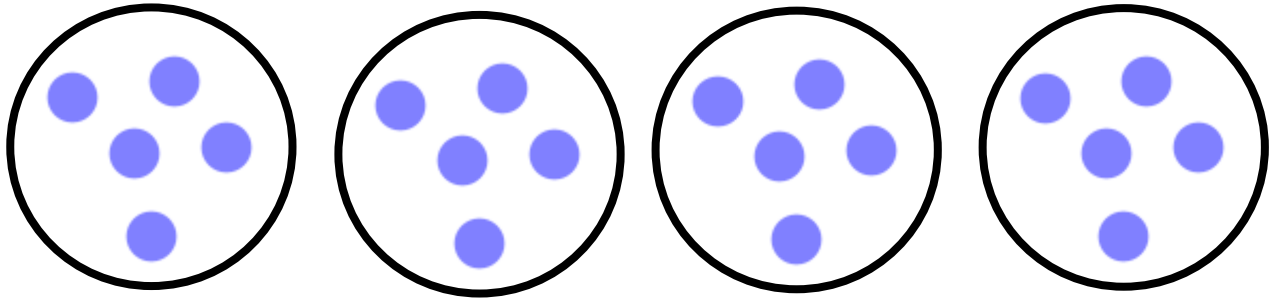
Stage 3:

add equal groups (repeated addition).

There are 4 groups of 5.

5 + 5 + 5 + 5 = 20

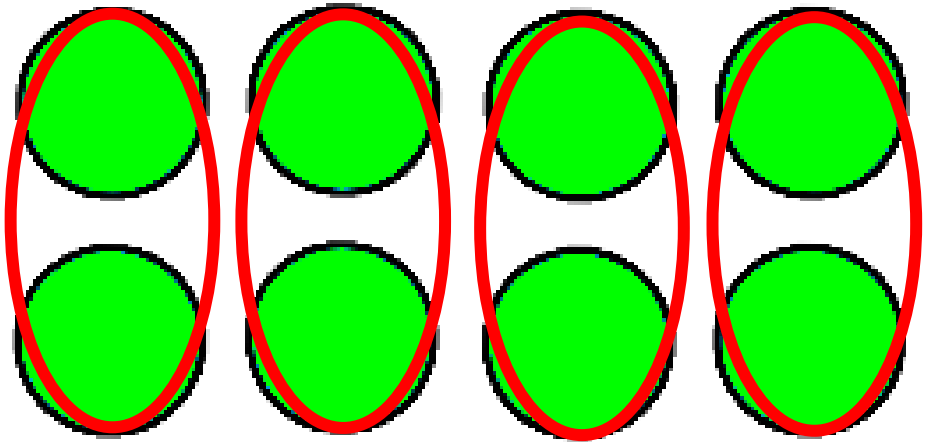




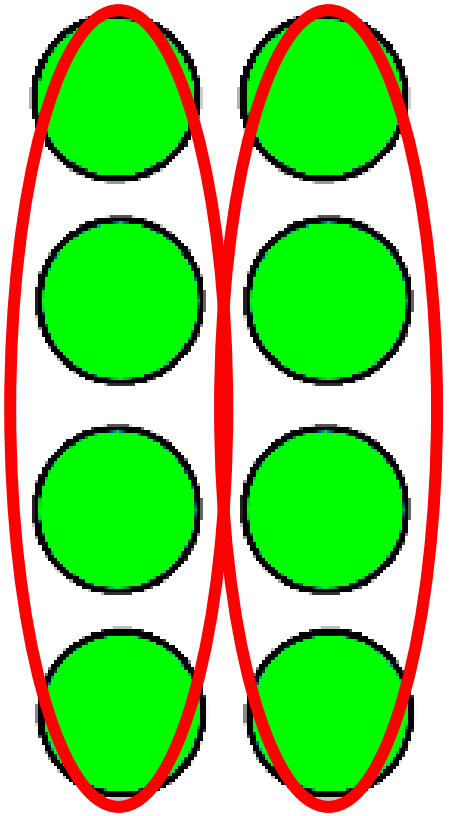
make arrays.

Stage 4:

groups of
$4 \times 2 = 8$



groups of
$2 \times 4 = 8$



LKS2 Multiplication

Stages

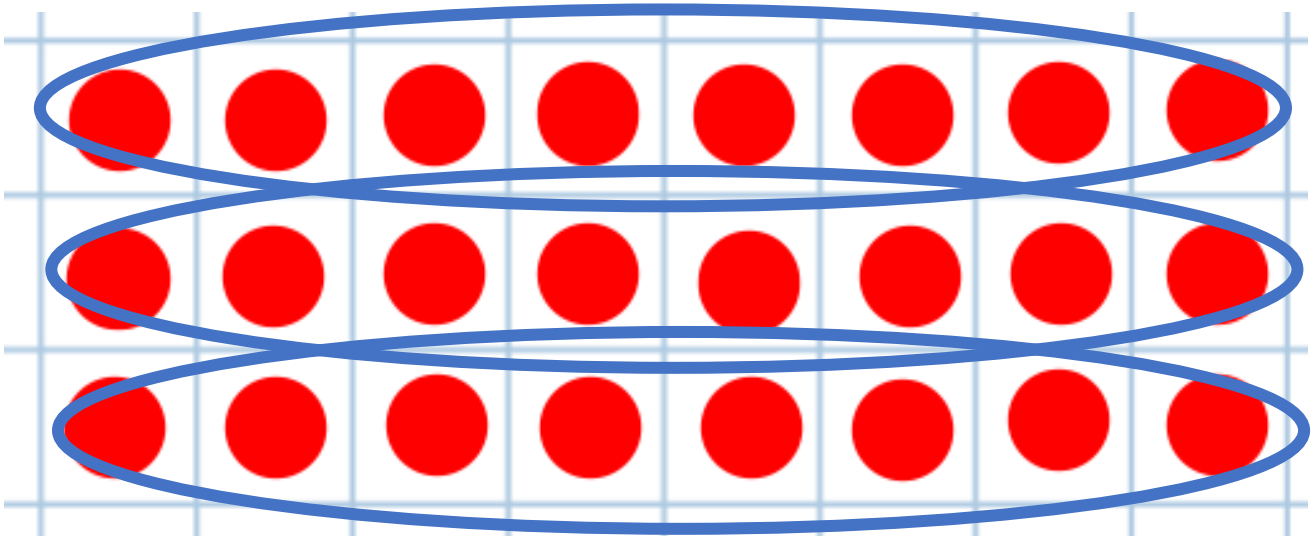
multiply using arrays.

Stage 5:

$$8 + 8 + 8 = 24$$

$$3 \text{ groups of } 8 = 24$$

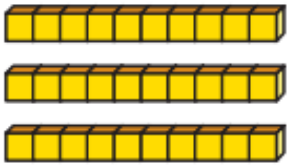
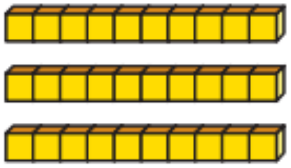
$$3 \times 8 = 24$$

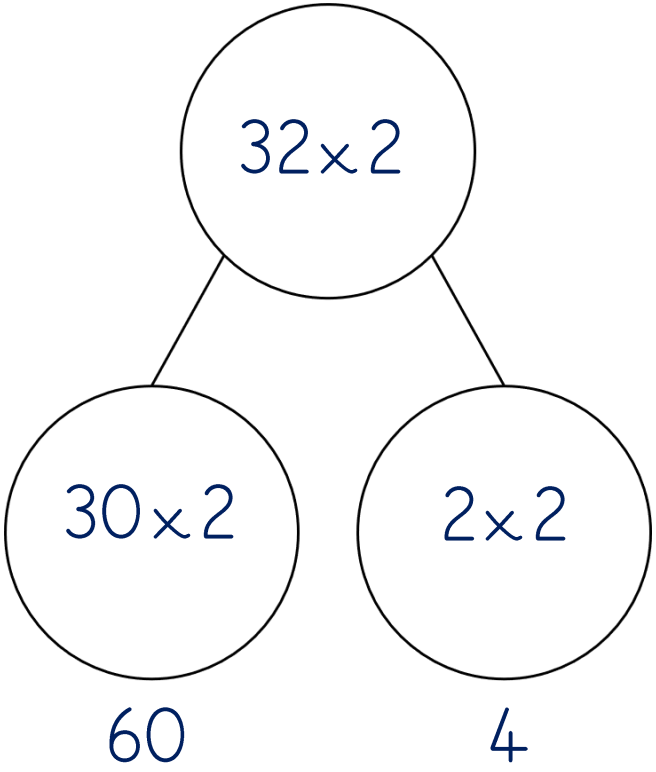


Stage 6:

multiply using partitioning (no exchange).

$$32 \times 2 = 64$$

Tens	Ones
	
	



3 tens × 2 = 6 tens

2 ones × 2 = 4 ones

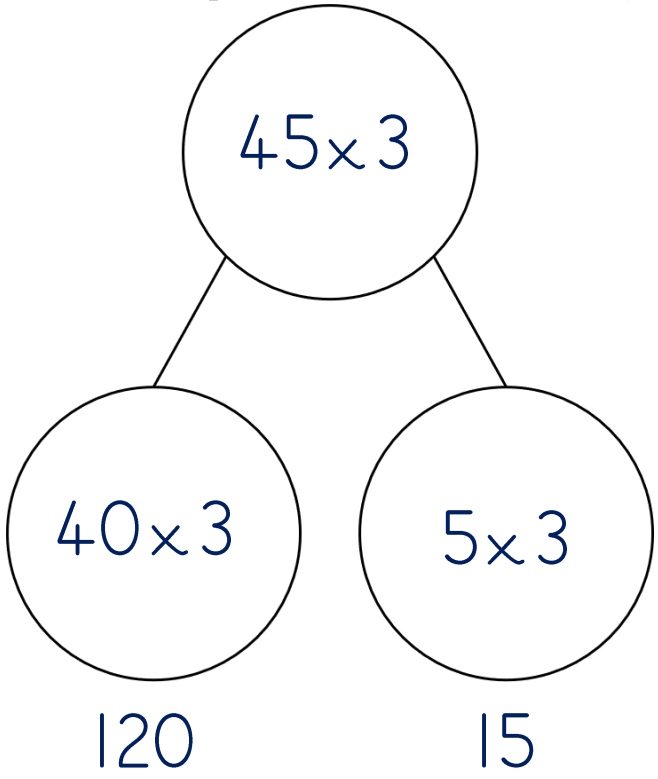
60 + 4 = 64

Stage 7:

multiply using partitioning (exchange).

$45 \times 3 = 135$

Tens	Ones
10 10 10 10	1 1 1 1 1
10 10 10 10	1 1 1 1 1
10 10 10 10	1 1 1 1 1



4 tens × 3 = 12 tens

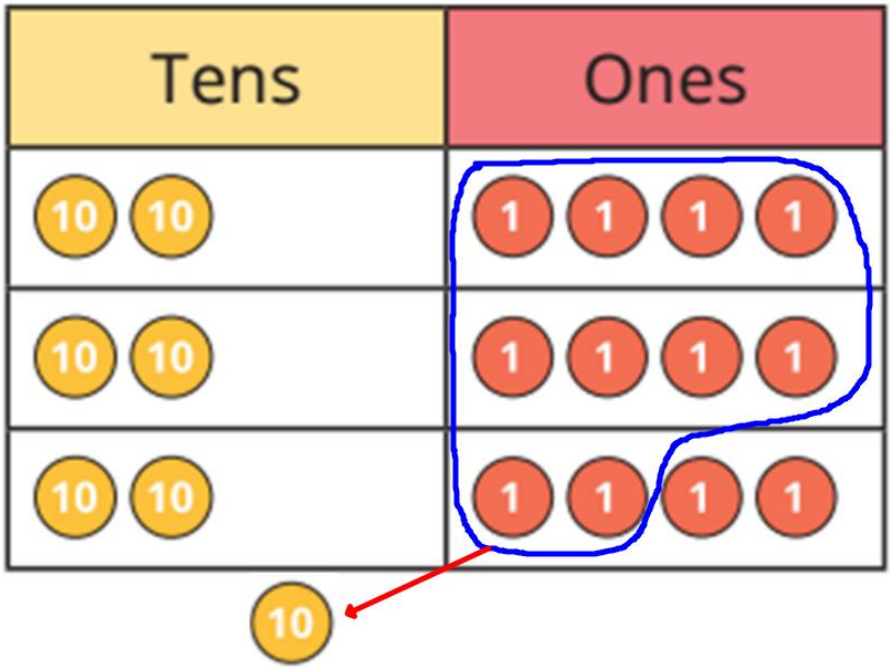
5 ones × 3 = 15 ones

120 + 15 = 135

Stage 8:

multiply using the expanded form.

$$24 \times 3 = 72$$



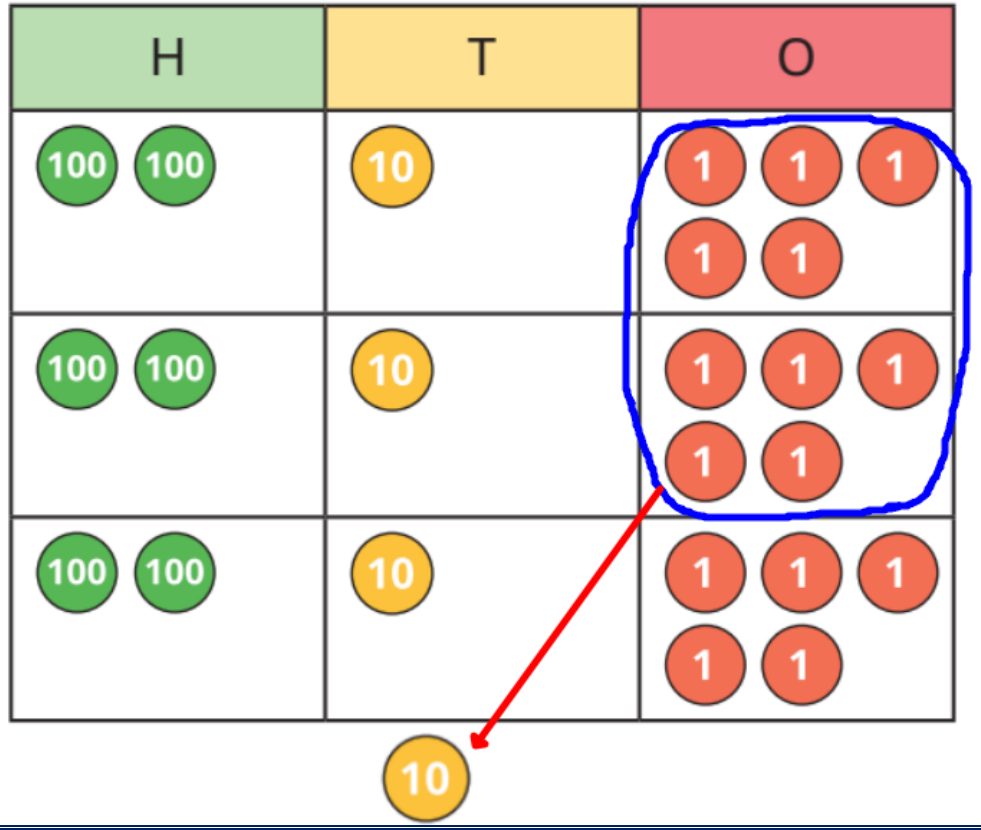
	H	T	O	
		2	4	
×			3	
		1	2	
		6	0	
		7	2	

(4 × 3)
(20 × 3)

short multiplication.

Stage 9:

215 x 3 = 645



	H	T	O
	2	1	5
x			3
	6	4	5
		1	

UKS2 Multiplication

Stages

Stage 10:

short multiplication with larger numbers.

1,152 x 3 = 3,456

Th	H	T	O
1,000	100	10 10 10 10 10	1 1
1,000	100	10 10 10 10 10	1 1
1,000	100	10 10 10 10 10	1 1

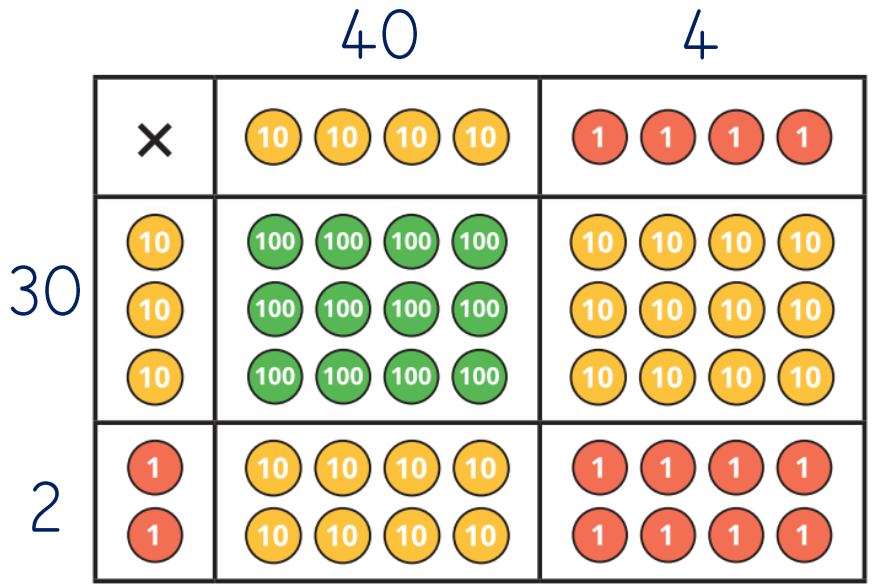
10

	1	1	5	2
×				3
	3	4	5	6
		1		

Stage 11:

multiply using the area model.

44 × 32 = 1,408



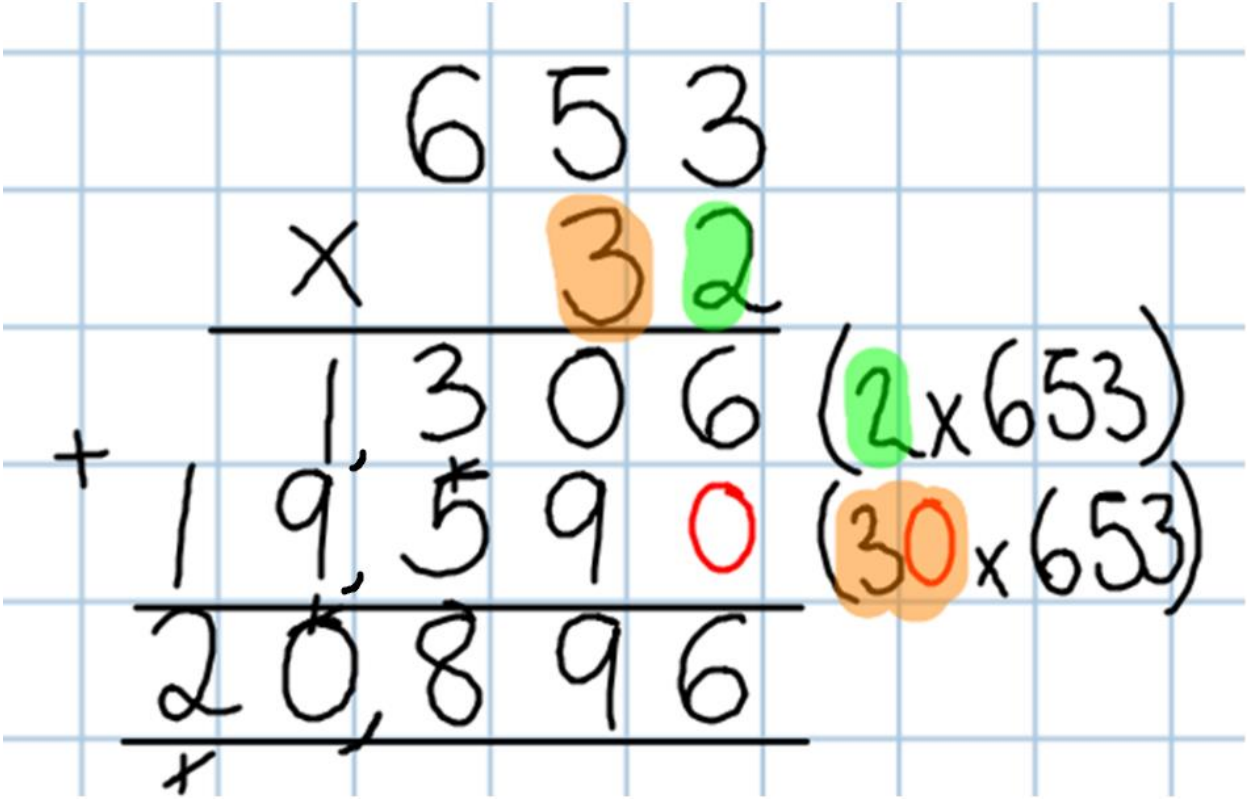
×	40	4
30	1,200	120
2	80	8

44 × 32 = 1,200 + 80 + 120 + 8 = 1,408

long multiplication.

Stage 12:

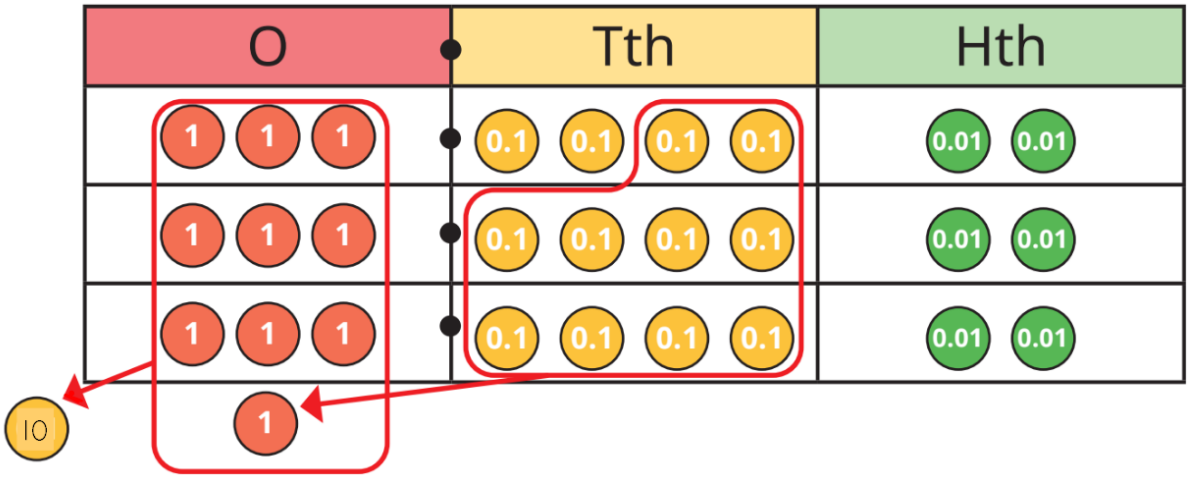
653 x 32 = 20,896



multiplying decimals.

Stage 13:

$$3.42 \times 3 = 10.26$$



		3	• 4	2
×				3
	1	0	• 2	6
		1		

Multiplication Vocabulary

repeated addition

array

product

times

groups of

multiply

multiplied by

lots of

Conceptual Vocabulary

- Multiplication

multiplied by

5 x 3 equals = 15

factor

factor

product