

Key Vocabulary

Multiplication and Division Facts

Multiply and Divide by 0, 1, 10 and 100

multiply
groups of
lots of
times
divide
share
remainder

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

$0 \times 15 = 0$

H	T	O
	●●	●●●
	●●	●●●

↓ × 10

H	T	O
●●	●●●	
●●	●●	

$45 \times 10 = 450$

Th	H	T	O
		●●●	●●●
		●●●	

↓ × 100

Th	H	T	O
●●●	●●●		
●●●			

$63 \times 100 = 6300$

$1 \times 15 = 15$

H	T	O
●●	●●●	
●●	●●	

↓ ÷ 10

H	T	O
	●●	●●●
	●●	●●

$450 \div 10 = 45$

Th	H	T	O
●●●	●●●		
●●●			

↓ ÷ 100

Th	H	T	O
		●●●	●●●
		●●●	

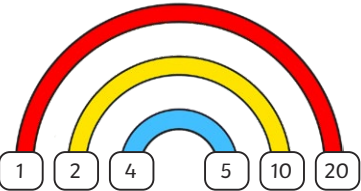
$6300 \div 100 = 63$

Factor pairs and Commutativity

Multiply Using Informal and Formal Methods

factor
multiple
product

20



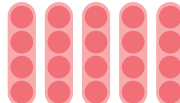
1 2 4 5 10 20

The factors of 20 are 1, 2, 4, 5, 10 and 20.

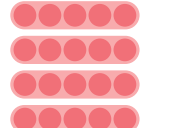
The factor pairs are:

1 and 20 2 and 10 4 and 5

$5 \times 4 = 20$

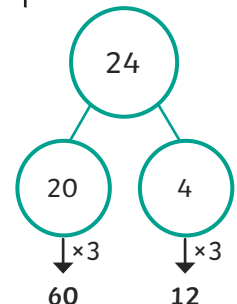


$4 \times 5 = 20$



$10 \times 3 = 30$ $10 \times 3 = 30$ $4 \times 3 = 12$ $24 \times 3 = 60 + 12 = 72$

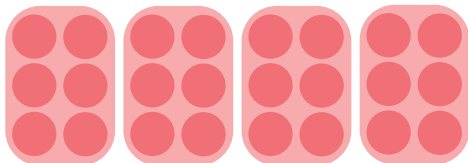
Tens	Ones
●●●●	●●●
●●●●	●●●
●●●●	●●●
●●●●	●●●



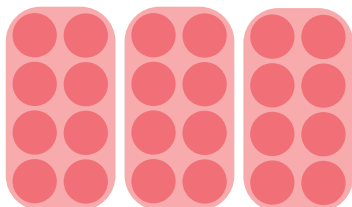
Th	H	T	O
	5	4	3
			4
<hr/>			
2	1	7	2
<hr/>			
	1	1	

Mental Calculations for Solving Problems

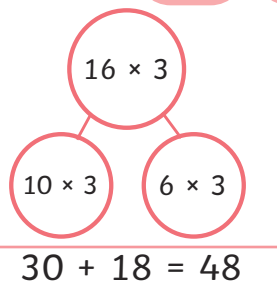
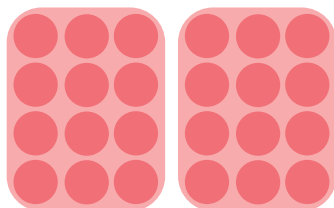
$$(2 \times 3) \times 4 = 24$$



$$(2 \times 4) \times 3 = 24$$

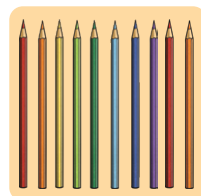


$$(3 \times 4) \times 2 = 24$$



Integer Scaling

10 pencils

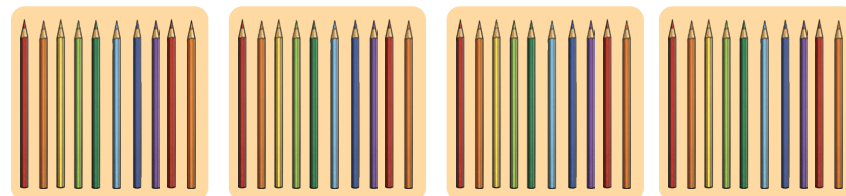


75g

$$5 \times 7 = 35$$

$$5 \times 70 = 350$$

10 x 4 = 40 pencils



75g x 2 = 150g

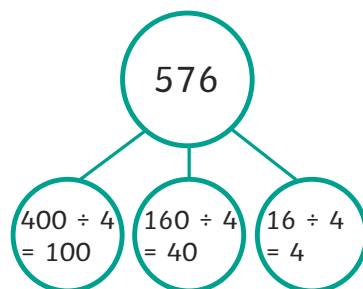
$$350 \div 5 = 70$$

$$3500 \div 5 = 700$$

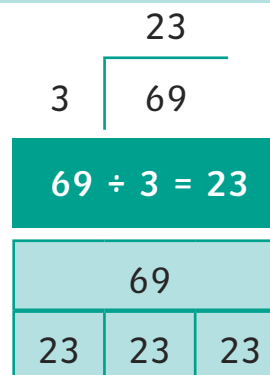
Short Division with Exact Answers

$$576 \div 4 = 144$$

Hundreds	Tens	Ones
100	10 10 10 10	1 1 1 1
100	10 10 10 10	1 1 1 1
100	10 10 10 10	1 1 1 1
100	10 10 10 10	1 1 1 1



There are 69 tennis balls packed in tubes of 3.



Correspondence Problems

Hat	Scarf	Gloves
 	   	  

2

4

3

Number of different combinations is:
 $2 \times 4 \times 3 = 24$