

Key Vocabulary

Multiplication and Division Facts

Use Place Value to Multiply and Divide Mentally

multiply

x	1	2	3	4	5	6	7	8	9	10	11	12
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groups of

1	1	2	3	4	5	6	7	8	9	10	11	12
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lots of

2	2	4	6	8	10	12	14	16	18	20	22	24
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times

3	3	6	9	12	15	18	21	24	27	30	33	36
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divide

4	4	8	12	16	20	24	28	32	36	40	44	48
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share

5	5	10	15	20	25	30	35	40	45	50	55	60
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remainder

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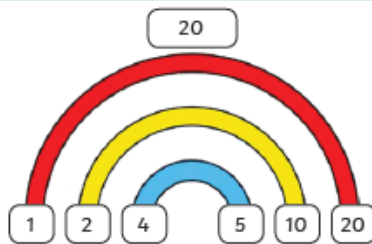
11	11	22	33	44	55	66	77	88	99	110	121	132
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12	12	24	36	48	60	72	84	96	108	120	132	144
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Factor pairs and Commutativity

Multiply Using Formal Written Methods

factor



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

$5 \times 4 = 20$



$4 \times 5 = 20$



Th	H	T	O
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	5	4	3
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x			4
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		1	2	(4 × 3)
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	1	6	0	(4 × 40)
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2	0	0	0	(4 × 500)
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2	1	7	2
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Th	H	T	O
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	5	4	3
--	---	---	---

X			4
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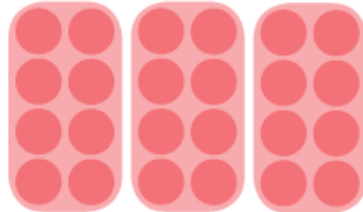
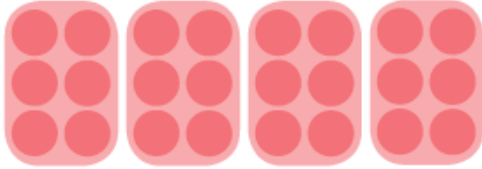
2	1	7	2
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Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.

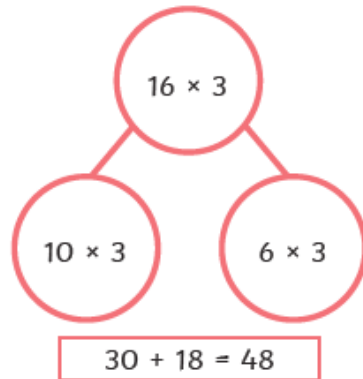
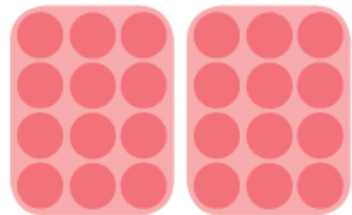
Mental Calculations for Solving Problems

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

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



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

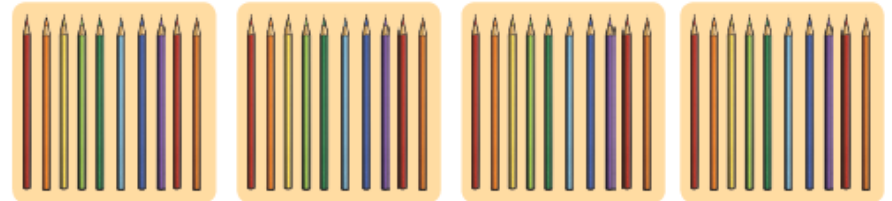


Integer Scaling Problems

10 pencils



$10 \times 4 = 40$ pencils



75g



$75\text{g} \times 2 = 150\text{g}$



Short Division with Exact Answers

There are 69 tennis balls packed in tubes of 3.

There are 23 tubes altogether.

$$69 \div 3 = 23$$

69		
23	23	23

$$\begin{array}{r}
 23 \\
 3 \overline{) 69} \\
 \underline{- 6} \\
 09 \\
 \underline{- 9} \\
 0
 \end{array}$$

