

Year 4: Maths – Place Value

Vocabulary

thousands

hundreds

tens

ones

zero

place value

greater than

less than

order

round

rounded to

negative number

partition

digit

Roman numeral

Counting in 6s

0	6	12	18	24	30	36	42	48	54	60
---	---	----	----	----	----	----	----	----	----	----

Counting in 7s

0	7	14	21	28	35	42	49	56	63	70
---	---	----	----	----	----	----	----	----	----	----

Counting in 9s

0	9	18	27	36	45	54	63	72	81	90
---	---	----	----	----	----	----	----	----	----	----

Counting in 25s

0	25	50	75	100	125	150	175	200	225	250
---	----	----	----	-----	-----	-----	-----	-----	-----	-----

Counting in 1000s

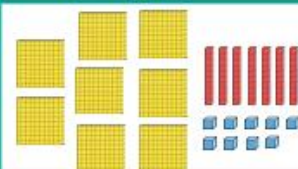
0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10 000
---	------	------	------	------	------	------	------	------	------	--------

Compare and Order

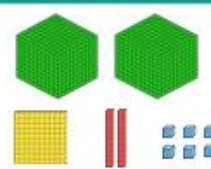
Th	H	T	O
●●●	●●●	●●	●●●

4324 > 3243
greater than

Th	H	T	O
●●●	●●	●●●	●●



879 < 2126
less than



2497

2508

3012

3521

3530

4002

smallest

greatest

1000 More or 1000 Less

1000 Less



1212



2212

1000 More



3212

Year 4: Maths – Place Value

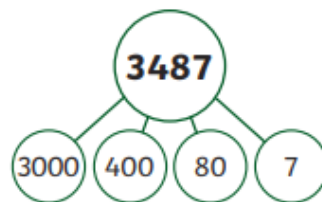
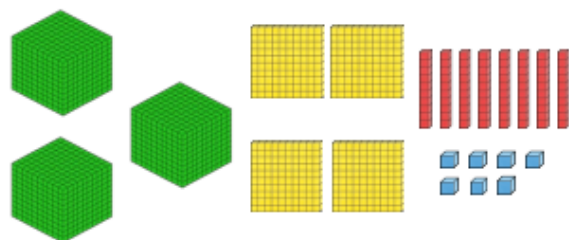
Represent 4-Digit Numbers

3487

three thousand, four hundred and eighty-seven

1000s	100s	10s	1s

Thousands	Hundreds	Tens	Ones
1000 1000 1000	100 100 100	10 10 10 10	1 1 1 1



Roman Numerals

one	1	I
five	5	V
ten	10	X
fifty	50	L
one hundred	100	C

XVIII = 18

XXIX = 29

LXXXIV = 84

Rounding

Look at the place value column to the right of the value you are rounding to. If this digit is a 4 or less, round down. If the digit is a 5 or more, round up.

Rounding to nearest 10

20	21	22	23	24	25	26	27	28	29	30
← round down					round up →					

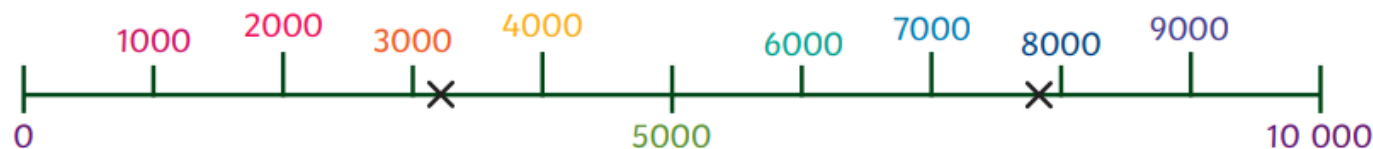
Rounding to the nearest 100

200	249	250	300
← round down		round up →	

Rounding to the nearest 1000

2000	2499	2500	3000
← round-down		round-up →	

Estimate on a Number Line



Year 4: Maths – Addition and Subtraction

Vocabulary

Add

Total

Plus

Sum

More

Altogether

Difference

Subtract

Less

Minus

Take away

Mentally, Orally

Column Addition

Column Subtraction

Exchange

Estimate

Inverse operation

Solve problems

Number facts

Add 4-digit numbers

No exchange

$$\begin{array}{r} 5162 \\ +3427 \\ \hline 8589 \end{array}$$

Starting with the ones, add each column in turn.

One exchange

$$\begin{array}{r} 5162 \\ +3497 \\ \hline 8659 \\ 1 \end{array}$$

Starting with the ones, add each column in turn. When adding

6 tens + 9 tens = 15 tens

= 1 hundred + 5 tens

Place 1 hundred under the hundreds answer and 5 tens in the answer.

Multiple exchanges

$$\begin{array}{r} 5864 \\ +3497 \\ \hline 9361 \\ 111 \end{array}$$

Starting with the ones, add each column in turn. Exchange tens, hundreds and/ or thousands as required.

Subtract 4-digit numbers

No exchange

$$\begin{array}{r} 5789 \\ -3421 \\ \hline 2368 \end{array}$$

Starting with the ones, subtract each column in turn.

One exchange

$$\begin{array}{r} 61 \\ 5749 \\ -3471 \\ \hline 2278 \end{array}$$

Starting with the ones, subtract each column in turn. When subtracting 4 tens - 7 tens, exchange 1 hundred to make:

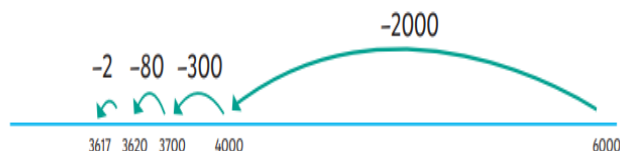
14 tens - 7 tens = 7 tens

Multiple exchanges

$$\begin{array}{r} 6131 \\ 5742 \\ -3476 \\ \hline 2266 \end{array}$$

Starting with the ones, subtract each column in turn. Exchange tens, hundreds and/ or thousands as required.

Calculate $6000 - 3617 = 2383$



Year 4: Maths – Area

Vocabulary

area

perimeter

centimetres

metres

squares

distance

millimetres

kilometres

length

width

rectilinear

right angle

Area and Perimeter

Area is the amount of space inside a 2D shape.

Perimeter is the total **distance** around the outside of a 2D shape.



Units of Measure for Perimeter

km

1 kilometre = 1000 metres

m

1 metre = 100 centimetres

cm

1 centimetre = 10 millimetres

mm

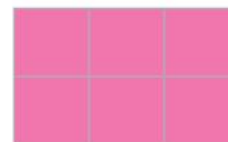


Measuring Area

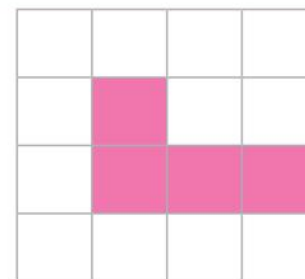
We can count **squares** to find the **area** of a **rectilinear** shape.



Area = 1 square



Area = 6 squares



Area = 4 squares

Rectilinear Figures

A **rectilinear** figure is a 2D shape whose sides all meet at **right angles** (90°).



Year 4: Maths – Multiplication and Division

- Vocabulary
- multiply
- groups of
- lots of
- times
- divide
- share
- remainder
- factor
- multiple
- product

Th	H	T	O
	5	4	3
x			4
		1	2
	1	6	0
2	0	0	0
2	1	7	2

(4 × 3)
(4 × 40)
(4 × 500)

Th	H	T	O
	5	4	3
x			4
2	1	7	2
	1	1	

Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.

$69 \div 3 = 23$

3 $\overline{) 69}$

69		
23	23	23



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

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

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

16×3

10×3

6×3

$30 + 18 = 48$

Factor pairs and Commutativity	Multiply Using Formal Written Methods																																																
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 $5 \times 4 = 20$ $4 \times 5 = 20$	<table border="1"> <thead> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>5</td> <td>4</td> <td>3</td> </tr> <tr> <td>x</td> <td></td> <td></td> <td>4</td> </tr> <tr> <td></td> <td></td> <td>1</td> <td>2</td> </tr> <tr> <td></td> <td>1</td> <td>6</td> <td>0</td> </tr> <tr> <td>2</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>2</td> <td>1</td> <td>7</td> <td>2</td> </tr> </tbody> </table> (4 × 3) (4 × 40) (4 × 500) <table border="1"> <thead> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>5</td> <td>4</td> <td>3</td> </tr> <tr> <td>x</td> <td></td> <td></td> <td>4</td> </tr> <tr> <td>2</td> <td>1</td> <td>7</td> <td>2</td> </tr> <tr> <td></td> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table> Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.	Th	H	T	O		5	4	3	x			4			1	2		1	6	0	2	0	0	0	2	1	7	2	Th	H	T	O		5	4	3	x			4	2	1	7	2		1	1	
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Vocabulary

multiply

groups of

lots of

times

divide

share

remainder

factor

multiple

product

Multiplication and Division Facts

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

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

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

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

16×3

10×3

6×3

$$30 + 18 = 48$$

Short Division with Exact Answers

$$576 \div 4 = 144$$

Hundreds	Tens	Ones
100	10 20 30 40	5 5 5 5
200	10 20 30 40	5 5 5 5
300	10 20 30 40	5 5 5 5
400	10 20 30 40	5 5 5 5

There are 69 tennis balls packed in tubes of 3.

$$\begin{array}{r} 23 \\ 3 \overline{) 69} \\ \underline{69} \\ 0 \end{array}$$

69		
23	23	23

```

graph TD
    A((576)) --- B((400 ÷ 4 = 100))
    A --- C((160 ÷ 4 = 40))
    A --- D((16 ÷ 4 = 4))
  
```



Multiply Using Informal and Formal Methods

$$10 \times 3 = 30$$

$$10 \times 3 = 30$$

$$4 \times 3 = 12$$

$$24 \times 3 = 60 + 12 = 72$$

Tens	Ones
	
	
	

24

20 4

$\times 3$ $\times 3$

60 12

Th	H	T	O
	5	4	3
×			4
2	1	7	2
	1	1	