

# Year 4 Number and Place Value

## Counting in multiples of 6

6	12	18	24
30	36	42	48
54	60	66	72

## Counting in multiples of 7

7	14	21	28
35	42	49	56
63	70	77	84

## Counting in multiples of 9

9	18	27	36
45	54	63	72
81	90	99	108

1000 less than		1000 more than
249	1,249	2,249
2,380	3,380	4,380
5,013	6,013	7,013
9,424	10,424	11,424

## Roman Numerals

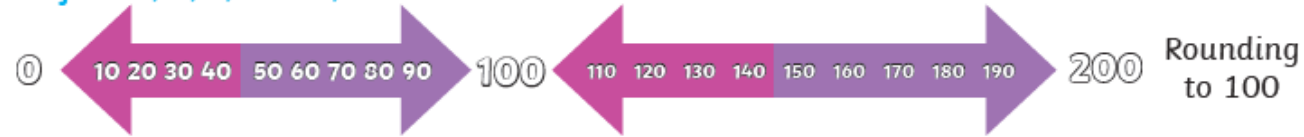
I = one  
 V = five  
 X = ten  
 L = fifty  
 C = hundred

If the ones digit is 1, 2, 3 or 4, leave the ten just as before.  
 If it's 5, 6, 7, 8 or 9, round UP to the next ten on the number line.



Rounding to 10

If the tens digit is 1, 2, 3 or 4, leave the hundred just as before.  
 If it's 5, 6, 7, 8 or 9, round UP to the next hundred on the number line.



Rounding to 100

If the hundreds digit is 1, 2, 3 or 4, leave the thousand just as before.  
 If it's 5, 6, 7, 8 or 9, round UP to the next thousand on the number line.



Rounding to 1000

# Year 4 Addition and Subtraction

## Addition: Column Method

1 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline \end{array}$$

2 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline 4 \end{array}$$

3 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline 4 \\ \hline \end{array}$$

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones.

Add the ones and write the answer.

Carry any tens to the tens column.

4 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline 34 \\ \hline \end{array}$$

5 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline 134 \\ \hline \end{array}$$

6 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline 14134 \\ \hline \end{array}$$

7 
$$\begin{array}{r} 7349 \\ +6785 \\ \hline 14134 \\ \hline 111 \end{array}$$

Add the tens including any tens you have carried. Carry any hundreds to the hundreds column.

Add the hundreds including any hundreds you have carried.

Add the thousands including any thousands you've carried.

Check your answer.

## Subtraction: Column Method

1 
$$\begin{array}{r} 5346 \\ -2747 \\ \hline \end{array}$$

2 
$$\begin{array}{r} 53\cancel{4}6 \\ -2747 \\ \hline 9 \end{array}$$

3 
$$\begin{array}{r} 5\cancel{3}46 \\ -2747 \\ \hline 99 \end{array}$$

Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones. Subtract the ones (the answer to  $6 - 7$  is negative).

Exchange a 10 from the 40 to give 16 ones. Subtract the ones:  $16 - 7 = 9$ .

Subtract the tens (the answer to  $30 - 40$  is negative). Exchange a 100 from the 300 to give:  $130 - 40 = 90$ .

4 
$$\begin{array}{r} 5\cancel{3}46 \\ -2747 \\ \hline 599 \end{array}$$

5 
$$\begin{array}{r} 5\cancel{3}46 \\ -2747 \\ \hline 2599 \end{array}$$

6 
$$\begin{array}{r} 5346 \\ -2747 \\ \hline 2599 \end{array}$$

Subtract the hundreds (the answer to  $200 - 700$  is negative). Exchange a 1000 from the 5000 to give:  $1200 - 700 = 500$ .

Subtract the thousands:  $4000 - 2000 = 2000$ .

Check your answer.

### Inverse operations

$$1230 + 3589 = 4819$$

$$3589 + 1230 = 4819$$

$$4819 - 1230 = 3589$$

$$4819 - 3589 = 1230$$

inverse  
operation  
opposite  
reverse  
backwards

addition  
more  
plus  
increase  
sum

altogether  
subtract  
take  
difference  
how many less

take away  
minus  
remove  
fewer  
decrease



# Year 4 Multiplication and Division

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

## Multiplication

multiply  
times  
groups of  
lots of  
repeated addition  
product  
multiplied by

## Division

group  
grouping  
sharing  
half  
halves  
share equally  
equal groups

## Multiplication Strategies

### Expanded Column Method

Line up the ones and the tens.

$$\begin{array}{r} \phantom{4}2 \\ \times \phantom{4}6 \\ \hline 12 \\ 240 \\ \hline 252 \end{array}$$

Multiply the ones.  $(2 \times 6)$   
Multiply tens.  $(40 \times 6)$   
Add the totals together.

$$42 \times 6 = 252$$

## Multiplication Magic

$$\begin{array}{c} \triangle \\ 60 \times 4 \end{array}$$

Draw the wizard's hat to find the facts to calculate

$$6 \times 4 = 24$$

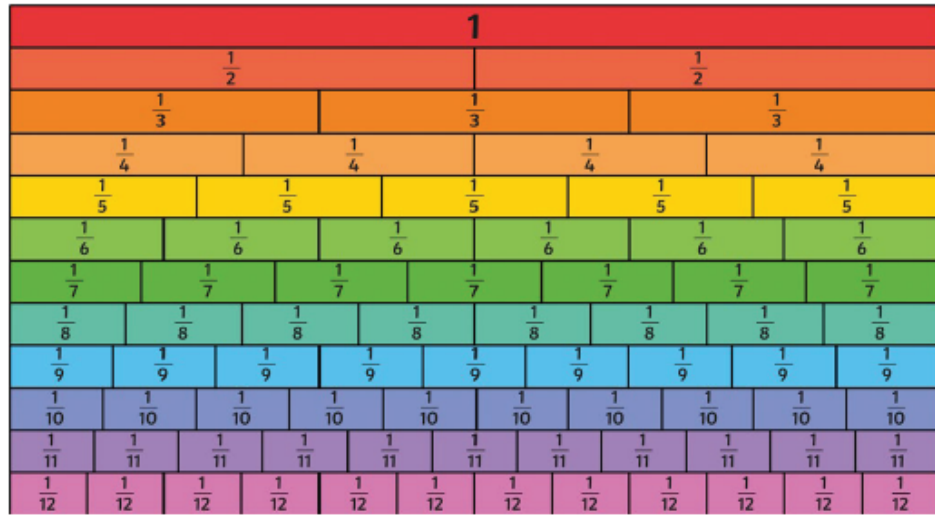
Multiply the answer by 10/100/1000

$$60 \times 4$$

Write your final answer

$$60 \times 4 = 240$$

# Year 4 Fractions



## Decimal Square 0.01 to 1

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.60
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70
0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.90
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1

# Year 4 Measurement

### Capacity


1 litre = 1000 millilitres  
1 centilitre = 10 millilitres



l
cl
ml

### Length

1 kilometre = 1000 metres  
1 metre = 100 centimetres  
1 centimetre = 10 millimetres




km
m
cm
mm

12-hour time		24-hour time		12-hour time		24-hour time	
12am (midnight)		00:00		12pm (noon)		12:00	
1am		01:00		1pm		13:00	
2am		02:00		2pm		14:00	
3am		03:00		3pm		15:00	
4am		04:00		4pm		16:00	
5am		05:00		5pm		17:00	
6am		06:00		6pm		18:00	
7am		07:00		7pm		19:00	
8am		08:00		8pm		20:00	
9am		09:00		9pm		21:00	
10am		10:00		10pm		22:00	
11am		11:00		11pm		23:00	

### Currency


1 pound = 100 pence



£
p

### Time


1 day = 24 hours  
1 hour = 60 minutes  
1 minute = 60 seconds



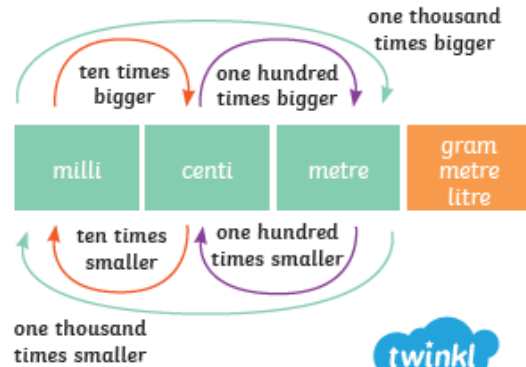
h
min
s

### Mass

1 tonne = 1000 kilograms  
1 kilogram = 1000 grams  
1 gram = 1000 milligrams




t
kg
g
mg

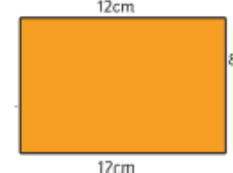


### Finding the Perimeter

The perimeter of this triangle is:  
 $5\text{cm} + 5\text{cm} + 5\text{cm} = 15\text{cm}$

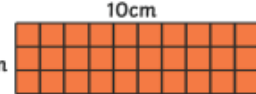


The perimeter of this rectangle is:  
 $12\text{cm} + 12\text{cm} + 8\text{cm} + 8\text{cm} = 40\text{cm}$

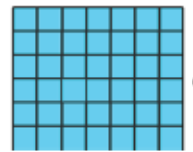


### Finding the Area: Rectangle

The area:  
 $10\text{cm} \times 3\text{cm} = 30\text{cm}^2$

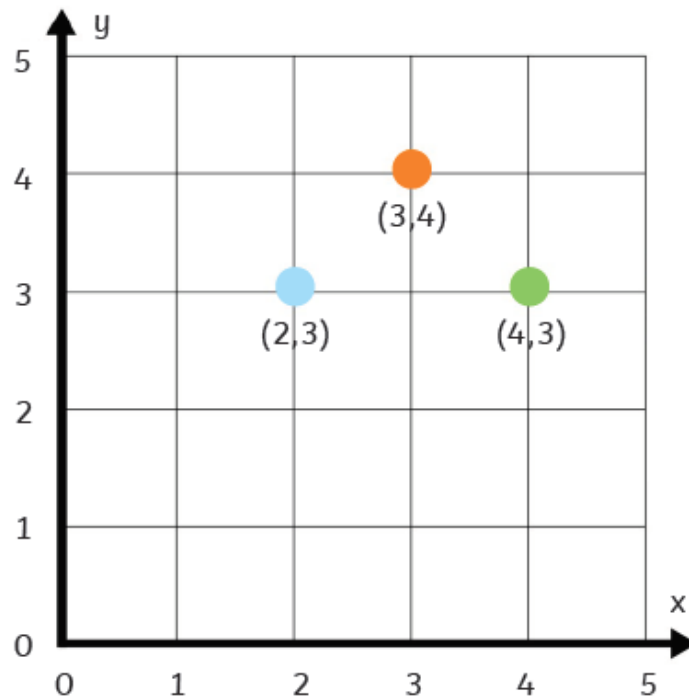


The area:  
 $7\text{cm} \times 6\text{cm} = 42\text{cm}^2$



# Year 4 Position and Direction

The x-axis coordinate always comes first, with the y-axis coordinate after it. Just like in the alphabet, x comes before y!



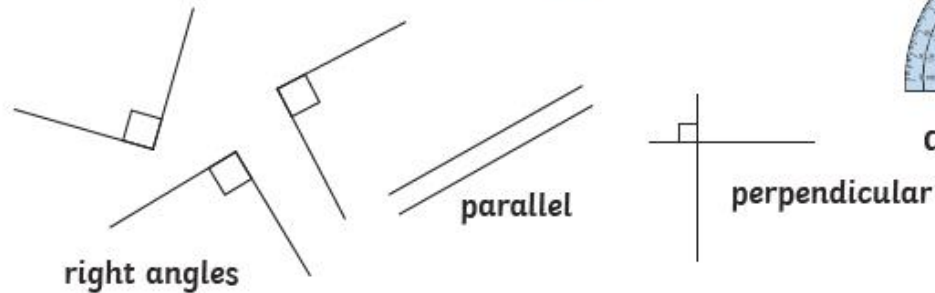
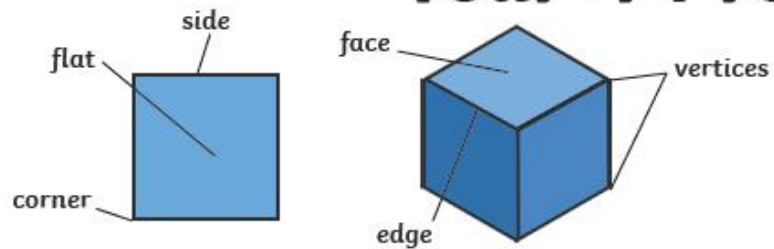
Left 

Right 

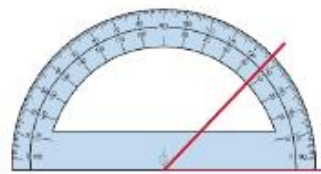
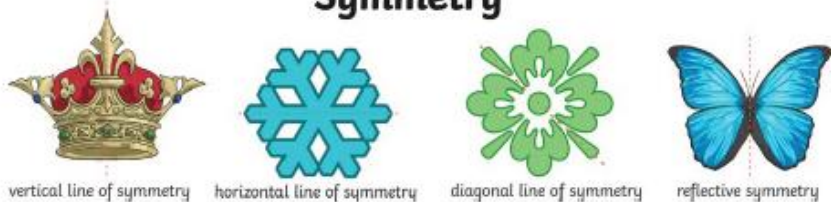
Up 

Down 

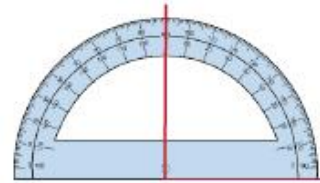
# Year 4 Properties of Shape



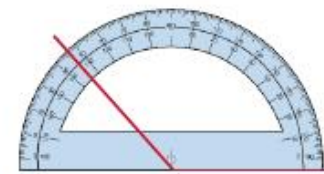
## Symmetry



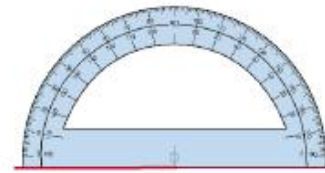
acute angle



right angle



obtuse angle



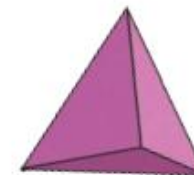
straight angle



square-based pyramid

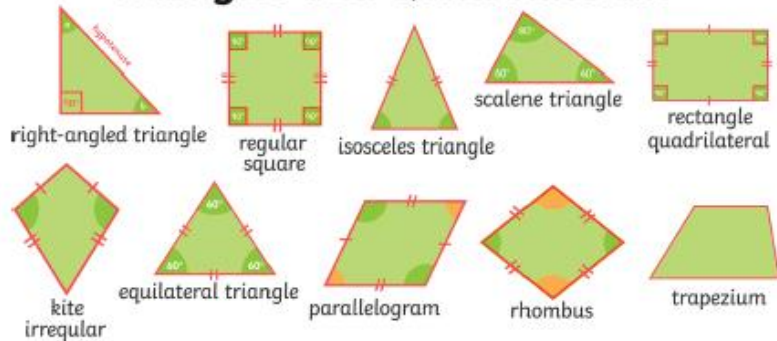


triangular prism

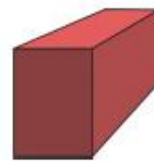


triangular-based pyramid

## Triangles and Quadrilaterals



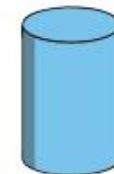
cube



cuboid



cone



cylinder



sphere

# Year 4 Statistics

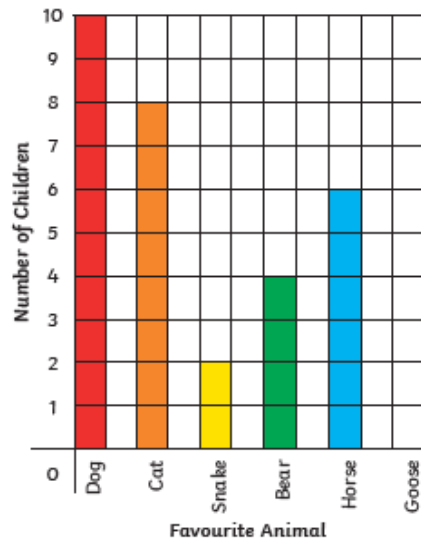
## Bar Chart

A bar chart is used to clearly display results and information.

Types of items are shown on the x-axis, which is horizontal.

The number of items are shown on the y-axis, which is vertical.





One block represents one item. It is quicker to compare results using a block diagram than a table or tally chart.



## Carroll Diagram

A Carroll diagram is a table used for sorting objects based on whether they do or do not meet two given criteria.

Carroll diagrams were invented by Lewis Carroll, the author of 'Alice in Wonderland'.

	Red	Not Red
Quadrilateral		
Not a Quadrilateral		

## Table

A table is used to record information and collect results.

The information can then be used to make pictograms or block diagrams to display results clearly.

A table needs to have headings to show what you are measuring or recording.

Favourite Animal	Number of Children
Dog	10
Cat	8
Snake	2
Bear	4
Horse	6
Goose	0