First numbers

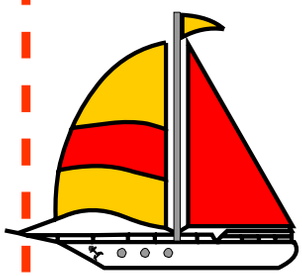
From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

First ordinals

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

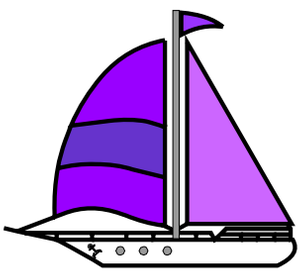
An ordinal number is a number that shows place or position in a series.

The Boat Race



1st

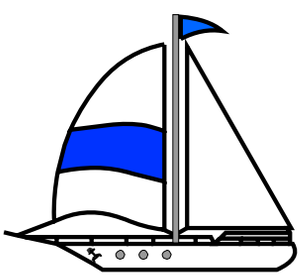
7th



5th

9th

2nd

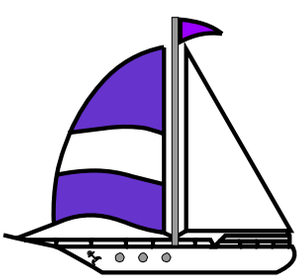


4th

8th

6th

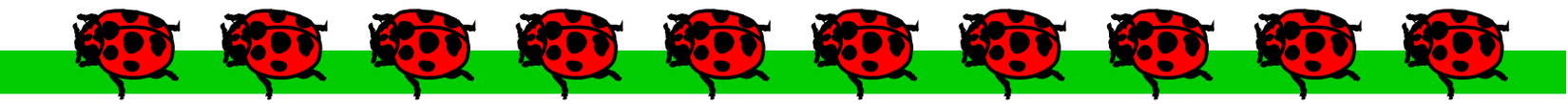
3rd



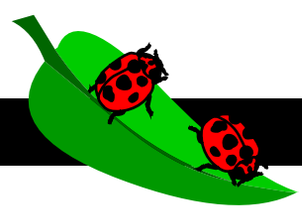
10th

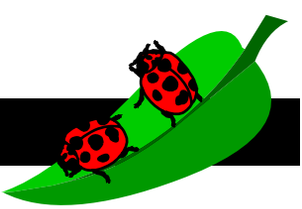
Ordinals Hundreds Chart

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com



1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th
31st	32nd	33rd	34th	35th	36th	37th	38th	39th	40th
41st	42nd	43rd	44th	45th	46th	47th	48th	49th	50th
51st	52nd	53rd	54th	55th	56th	57th	58th	59th	60th
61st	62nd	63rd	64th	65th	66th	67th	68th	69th	70th
71st	72nd	73rd	74th	75th	76th	77th	78th	79th	80th
81st	82nd	83rd	84th	85th	86th	87th	88th	89th	90th
91st	92nd	93rd	94th	95th	96th	97th	98th	99th	100th



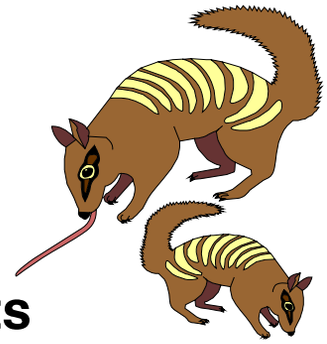


Numbers 1-10

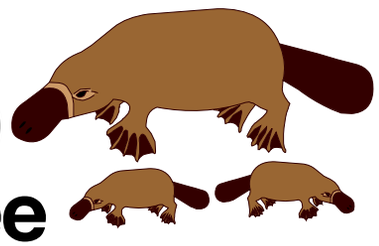
From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

1
one
koala

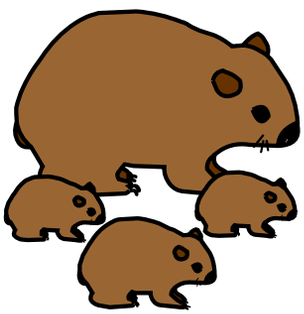
2
two
numbats



3
three
platypus

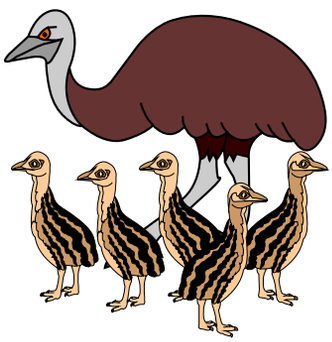


4
four
wombats

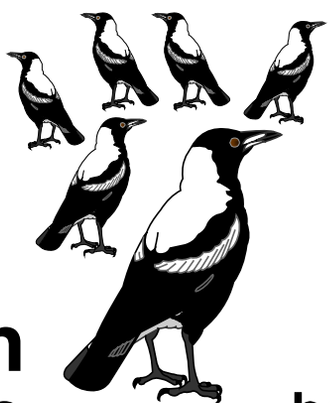


5
five
echidnas

6
six
emus



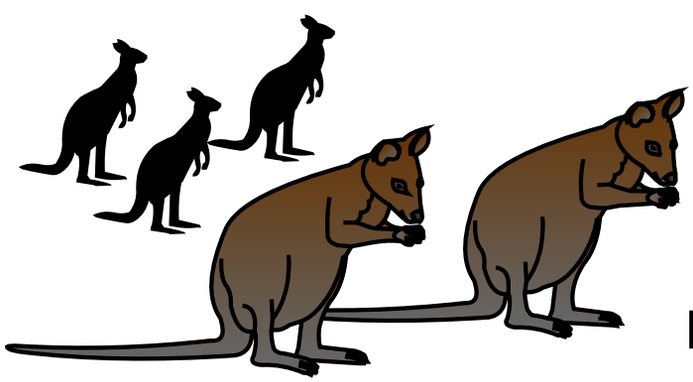
7
seven
magpies

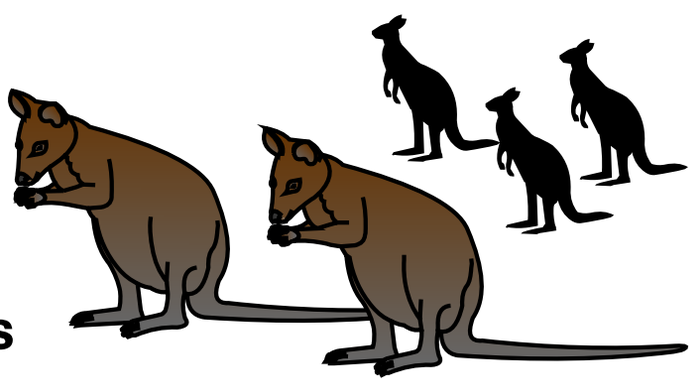


8
eight
honeyeaters

9
nine
wrens

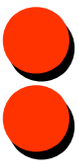
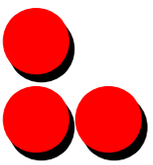
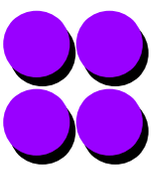
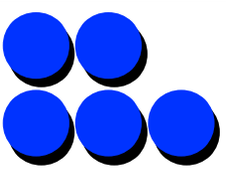
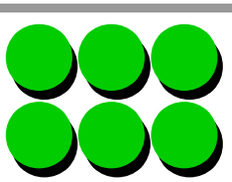
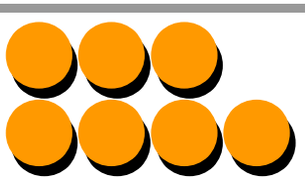
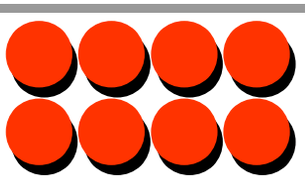
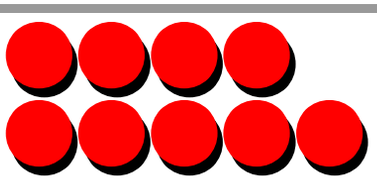
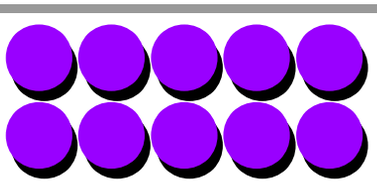
10
ten
kangaroos





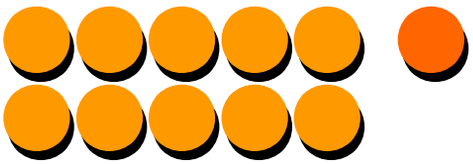
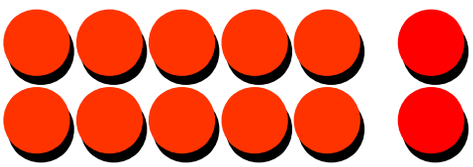
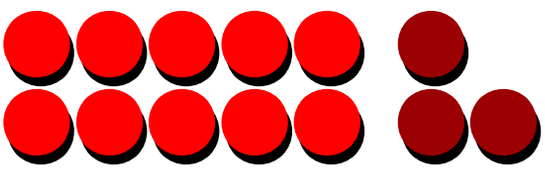
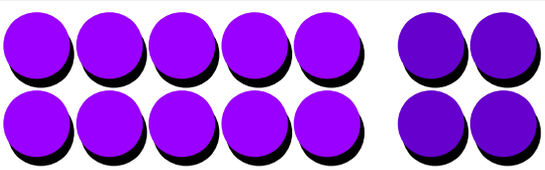
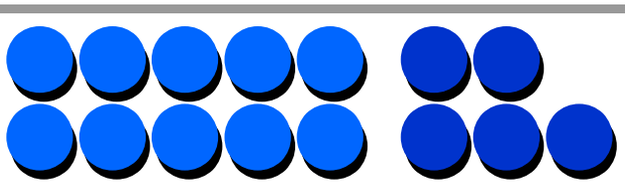
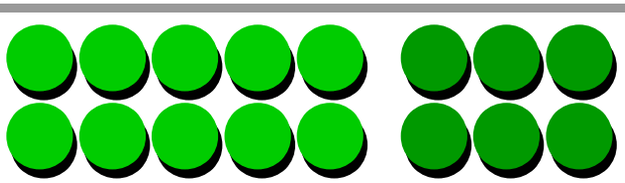
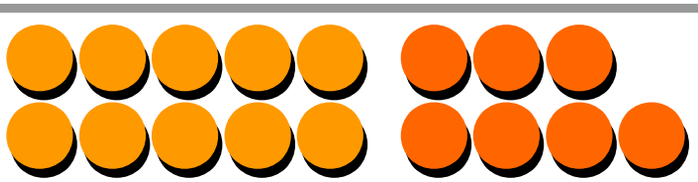
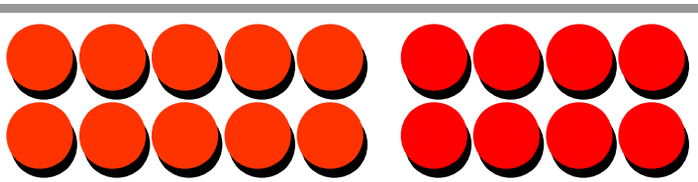
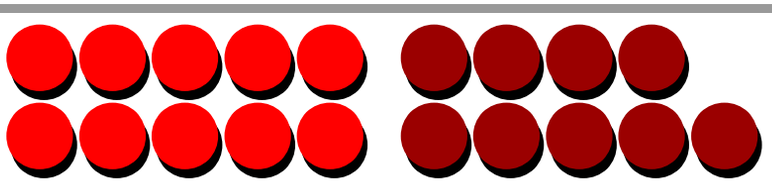
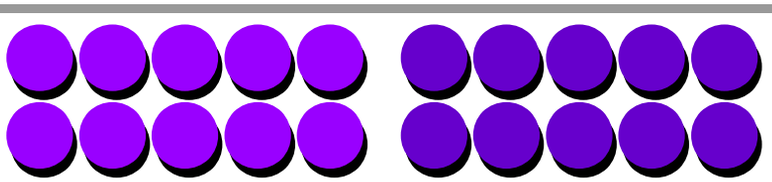
Numbers 1-10

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

1	one	
2	two	
3	three	
4	four	
5	five	
6	six	
7	seven	
8	eight	
9	nine	
10	ten	

Numbers 11-20

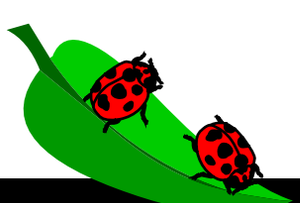
From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

11	eleven	
12	twelve	
13	thirteen	
14	fourteen	
15	fifteen	
16	sixteen	
17	seventeen	
18	eighteen	
19	nineteen	
20	twenty	

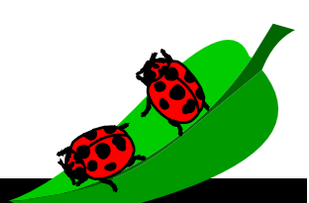
Hundreds Chart

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



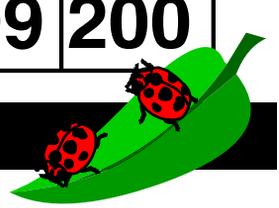
Count across for ones and down for tens.



Two Hundred Chart

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

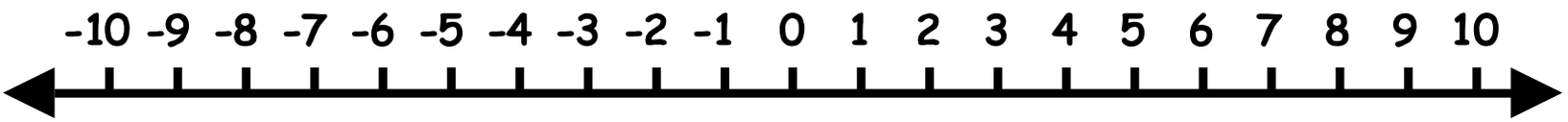
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200



Number Lines

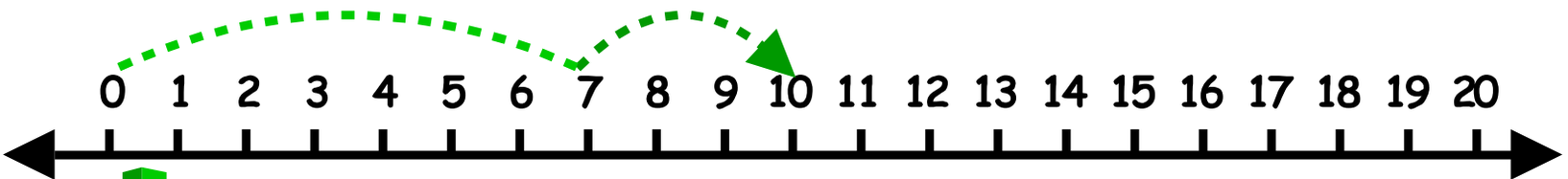
From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

A number line is a line on which real numbers are marked at regular intervals.

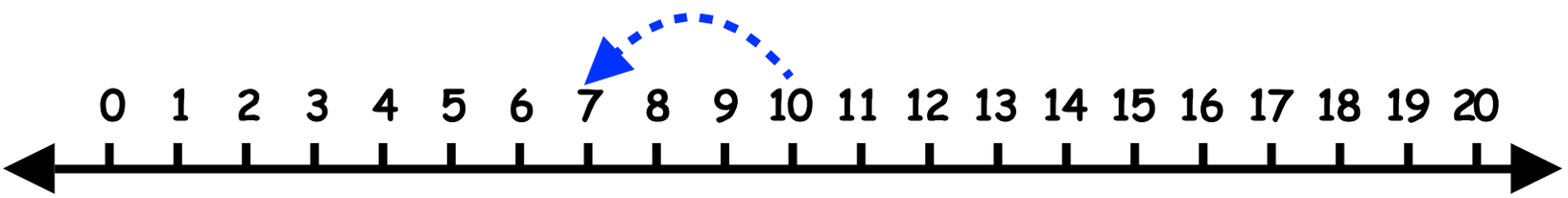


Number lines are usually labelled with integers.

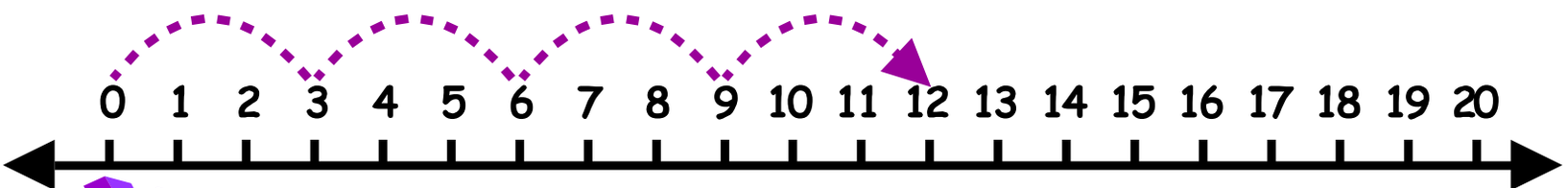
Number lines are useful to show simple number operations.



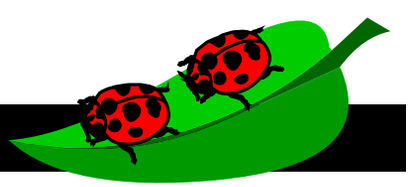
Addition (forwards) 7 + 3 = 10



Subtraction (backwards) 10 - 3 = 7



Multiplication (forwards) 4 x 3 = 12



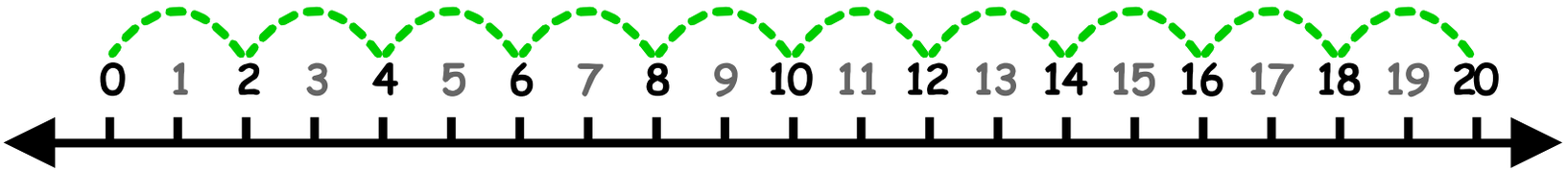
Related notes:

Most numbers used in mathematics, science and everyday life are called real numbers.

Integers are the positive and negative numbers and zero, excluding fractions.

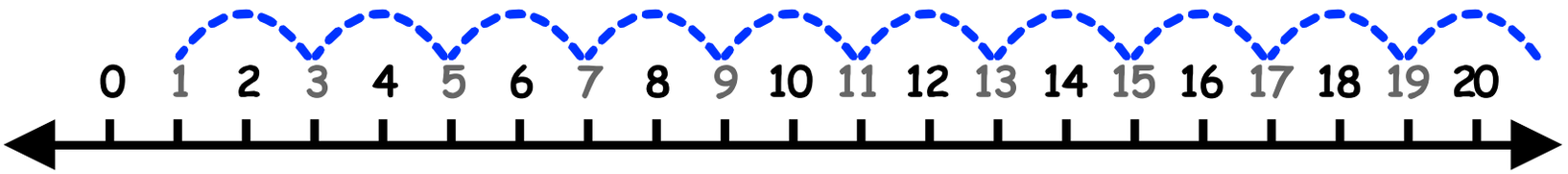
Skip Counting by 2s

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com



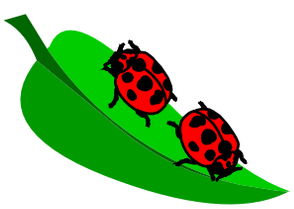
- **Using even numbers.**

2, 4, 6, 8, 10, 12, 14, 16, 18, 20



- **Using odd numbers.**

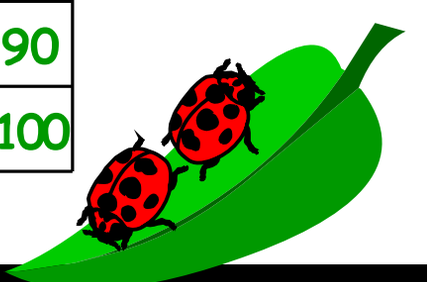
1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21



even

odd

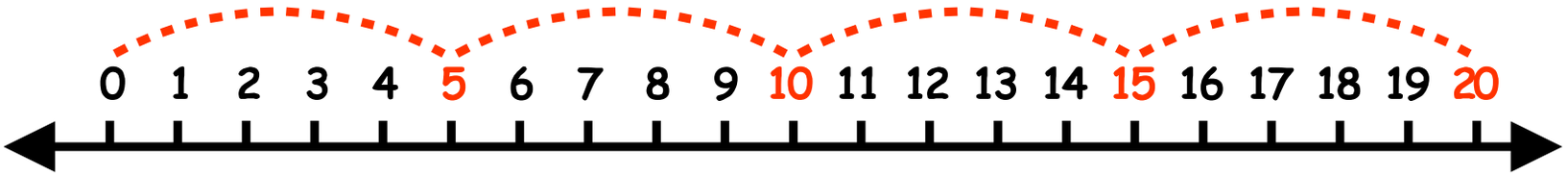
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Counting by 2s to 100

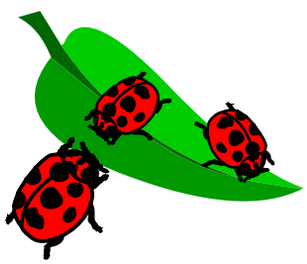
Skip Counting by 5s

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

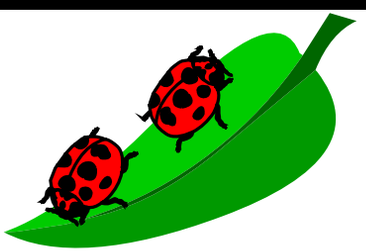


• Using every 5th number.

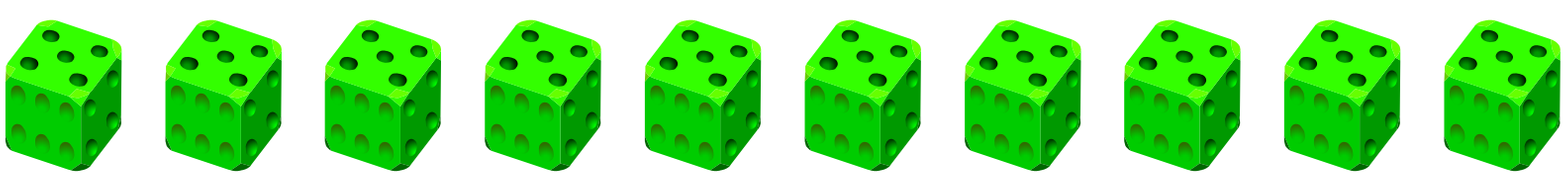
5, 10, 15, 20, 25, 30, 35, 40, 45, 50



Counting by 5s to 100

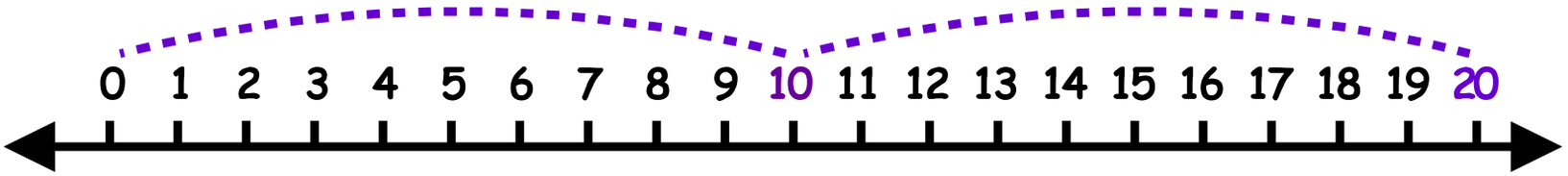


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



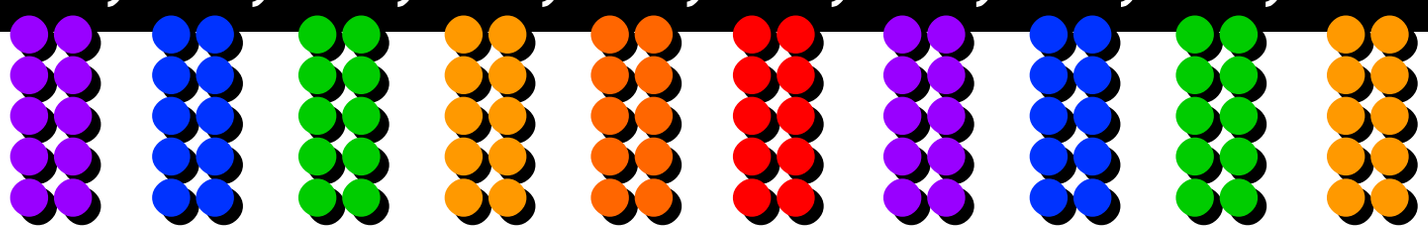
Skip Counting by 10s

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com



- Using every 10th number.

10, 20, 30, 40, 50, 60, 70, 80, 90, 100



Counting by 10s to 100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Start from any number at the top and count down the rows.

Odd and even numbers

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

even numbers

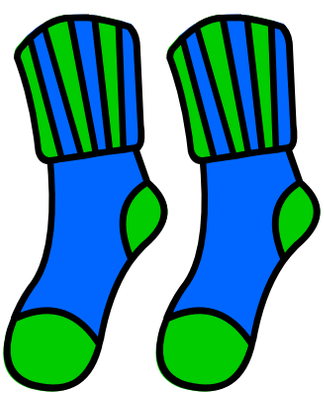
- numbers that are divisible by 2.
- even numbers end with 2, 4, 6, 8 or 0.

2, 4, 6, 8, 10, 12, 14, 16, 18, 20

odd numbers

- numbers that are not divisible by 2.
- odd numbers end with 1, 3, 5, 7 or 9.

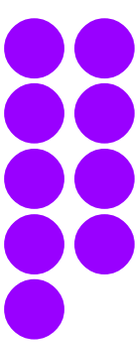
1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21

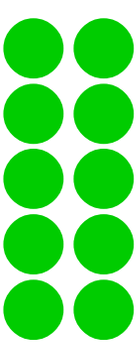


odd

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

even





Prime and composite numbers

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

prime number

- a positive integer that has exactly two factors
- can only be divided evenly by 1 or itself.

3 $3 = 1 \times 3$ $3 \div 1 = 3$

5 $5 = 1 \times 5$ $5 \div 1 = 5$

7 $7 = 1 \times 7$ $7 \div 1 = 7$

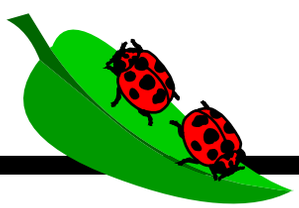
11 $11 = 1 \times 11$ $11 \div 1 = 11$

composite number

- a positive integer with more than two factors.

12 $12 = 1 \times 12$ $12 = 2 \times 6$ $12 = 3 \times 4$

$12 \div 1 = 12$ $12 \div 2 = 6$ $12 \div 3 = 4$



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Blue - prime numbers to 100.

Green - composite numbers to 100.

12 $12 = 2 \times 2 \times 3$

Every composite number has its own unique set of prime factors.

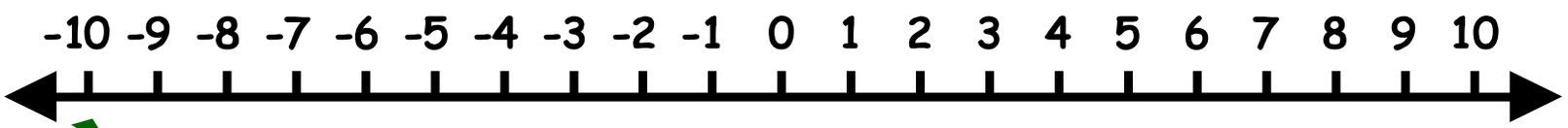
- 1 is neither prime nor composite
- 2 is the only even prime number

Negative and positive numbers

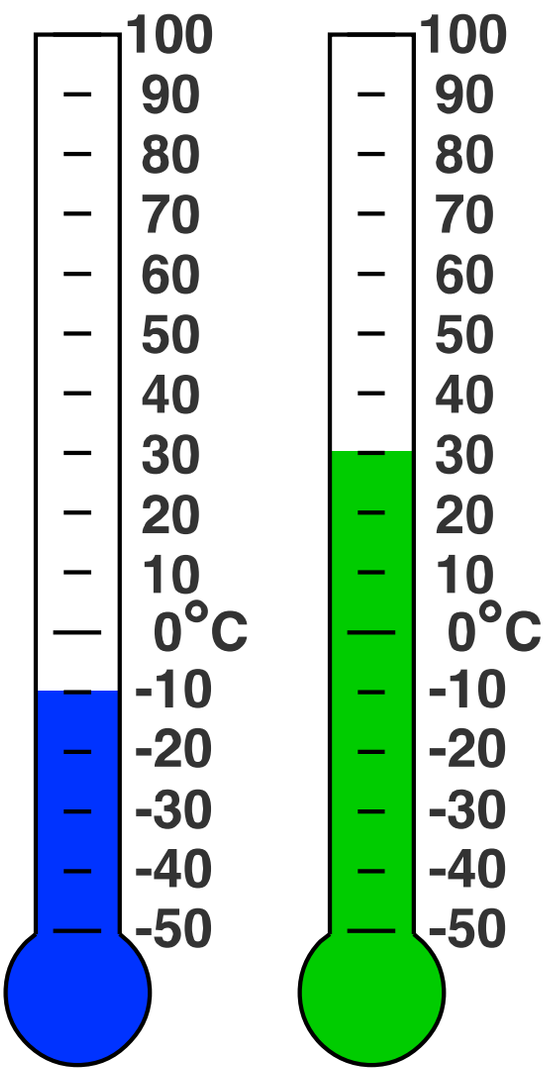
From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Negative numbers are numbers less than zero.

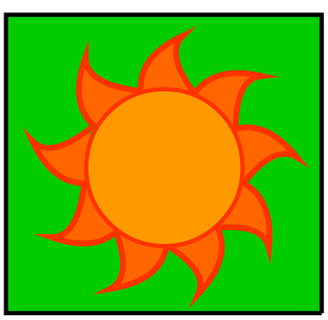
Positive numbers are numbers greater than zero.



Example: Celsius thermometers



The temperature is -10° C (negative)



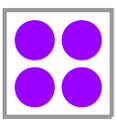
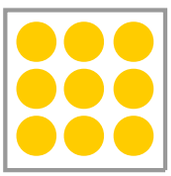
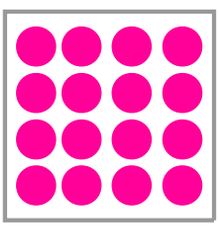
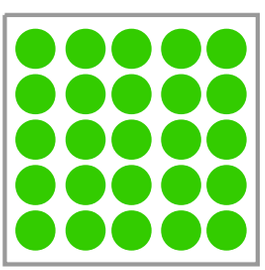
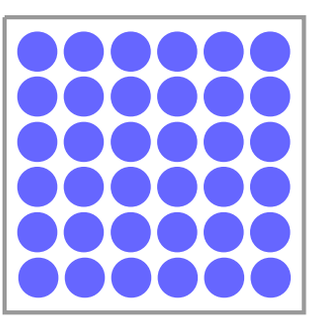
The temperature is 30° C (positive)

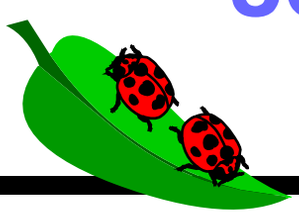
On the Celsius scale, 0° is the freezing point of water and 100° is the boiling point.

Square numbers

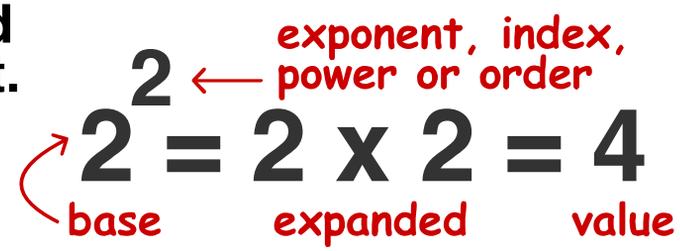
From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Square numbers are numbers which can be represented in the shape of a square. A square number results from multiplying an integer by itself and may also be called a perfect square.

4		2^2 or 2 x 2 = 4
9		3^2 or 3 x 3 = 9
16		4^2 or 4 x 4 = 16
25		5^2 or 5 x 5 = 25
36		6^2 or 6 x 6 = 36



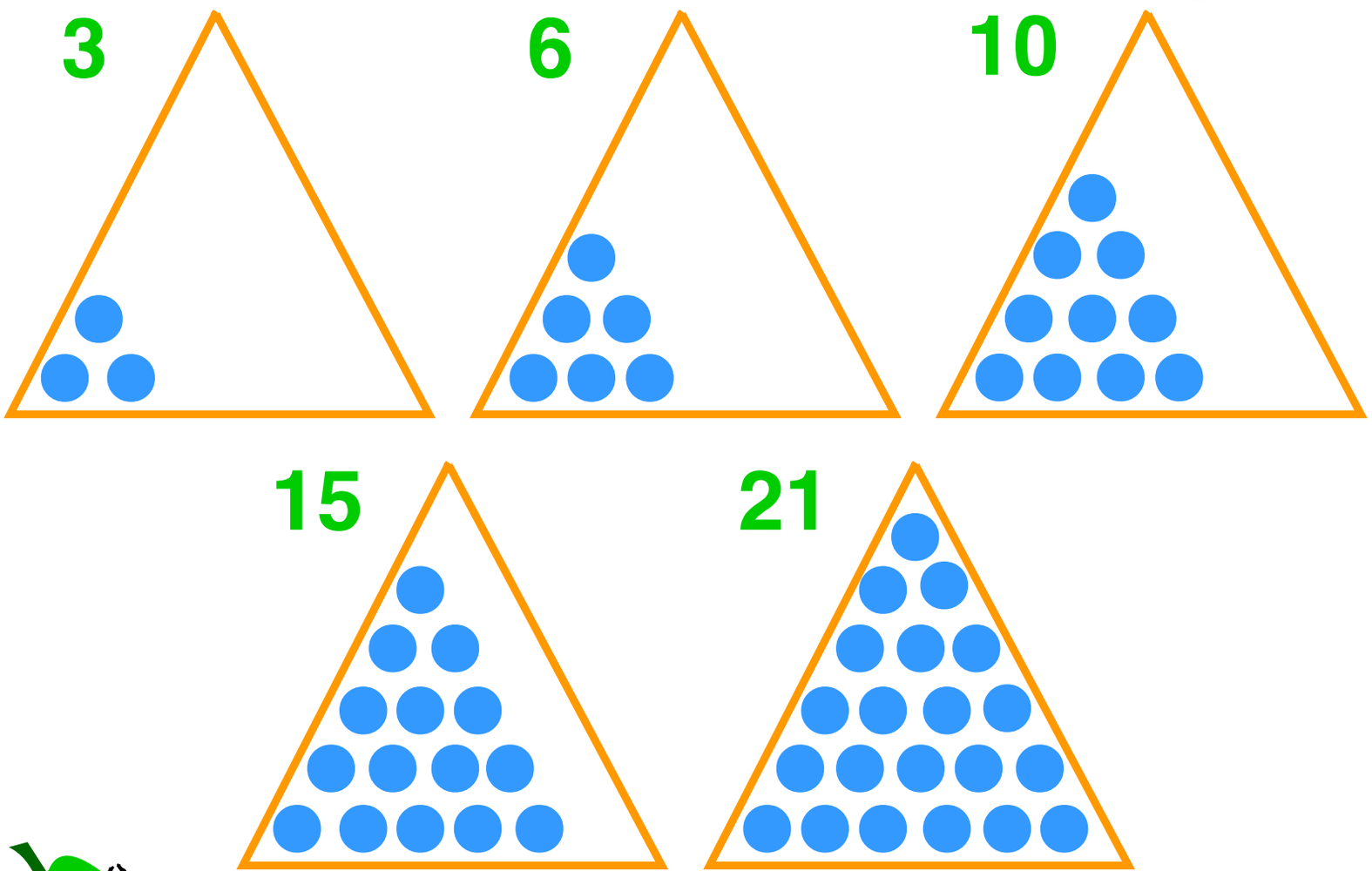
A number to be squared is indicated by a small 2 placed to its upper-right. This number is called an exponent, index, power or order and shows how many copies of the base number to multiply together.



Triangular numbers

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Triangular numbers are numbers that can be represented in the shape of a triangle.
EXAMPLES: 3, 6, 10, 15 and 21



Triangular numbers sequence rule:

$$x_n = n(n+1)/2$$

For example, the 10th triangular number is:

$$x_{10} = 10(10+1)/2 = 55$$

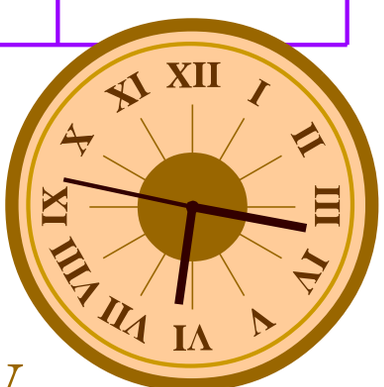
Roman Numerals

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

The Roman numeral system was invented by the ancient Romans and uses letters of the alphabet to represent numerical values.

Thousands		Hundreds		Tens		Units	
M	one thousand	C	one hundred	X	ten	I	one
MM	two thousand	CC	two hundred	XX	twenty	II	two
MMM	three thousand	CCC	three hundred	XXX	thirty	III	three
		CD	four hundred	XL	forty	IV	four
		D	five hundred	L	fifty	V	five
		DC	six hundred	LX	sixty	VI	six
		DCC	seven hundred	LXX	seventy	VII	seven
		DCCC	eight hundred	LXXX	eighty	VIII	eight
		CM	nine hundred	XC	ninety	IX	nine

EXAMPLES:



1	I	8	VIII
5	V	25	XXV
10	X	156	CLVI
50	L	1624	MDCXXIV
100	C	2379	MMCCCLXXIX
500	D	2800	MMDCCC
1000	M	3012	MMMXII

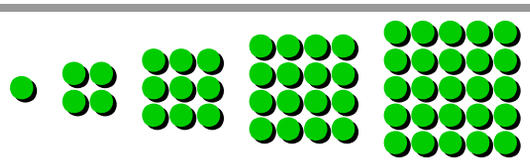
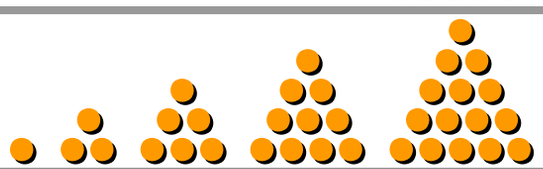
Roman numerals are often used on the faces of watches and clocks, to show the year a movie was released and in the names of popes and monarchs, e.g. Elizabeth II.

Number Sequences

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

A number sequence is an ordered set of numbers arranged according to a rule.

Examples:

Arithmetic sequences • same number added each time	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ...
Geometric sequences • multiplied by same number each time	2, 4, 8, 16, 32, 64, 128, 256, 512, ...
Odd numbers	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, ...
Even numbers	2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ...
Prime numbers	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31 ...
Composite numbers	4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20 ...
Square numbers	 1, 4, 9, 16, 25, ...
Triangular numbers	 1, 3, 6, 10, 15, ...
Fibonacci numbers	1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

The Fibonacci number sequence is named after the Italian mathematician Leonardo Fibonacci (1175-1250).
Each number is the sum of the two numbers before it.

Types of Numbers

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Numbers describe quantities or values.
There are many types of numbers.
Numerals are symbols used to represent numbers.

Types of numbers and numerals include:

Hindu Arabic Numerals • used in the decimal system.	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ...
Roman Numerals	I, II, III, IV, V, VI, VII, VII, ...
Ordinal Numbers	1st, 2nd, 3rd, 4th, 5th , ...

Most numbers used in mathematics, science and everyday life are called real numbers.

Real numbers may be classified as:

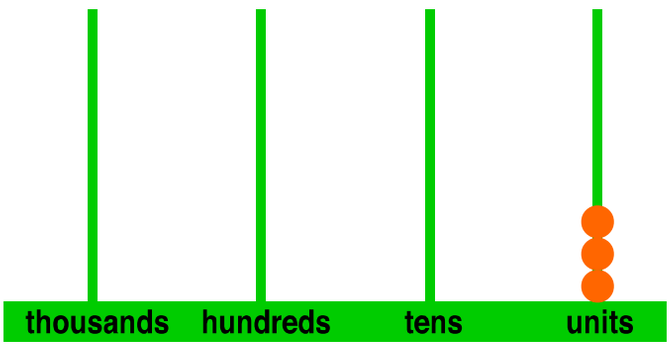
Natural Numbers	Counting numbers from one to infinity.	1, 2, 3, ...
Whole Numbers	Counting numbers from zero to infinity.	0, 1, 2, 3, ...
Integers	Positive and negative numbers (excluding fractions) and zero.	... -3, -2, -1, 0, 1, 2, 3, ...
Rationals	Integers, fractions, terminating and repeating decimals.	... -3, -2, -1, 0, 1, 2, 3, ... $\frac{1}{2}$ 0.5 $\frac{1}{3}$ 0.3333333...
Irrationals	Non-terminating and non-repeating decimals.	3.14159265359... $\pi, \sqrt{2}, \sqrt{3}$

Place Value

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

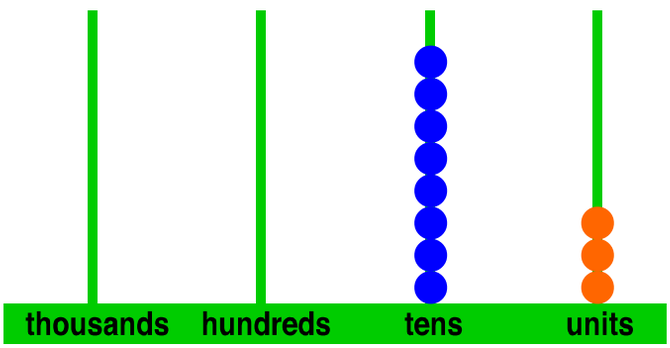
Place value is the value of a digit depending on its place in a number.

Units and ones mean the same thing.



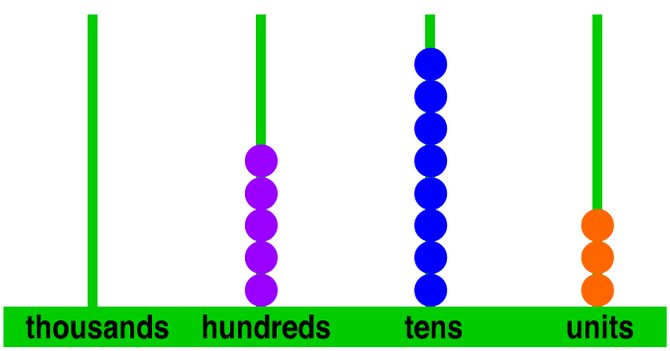
Thousands	Hundreds	Tens	Ones
			3

three



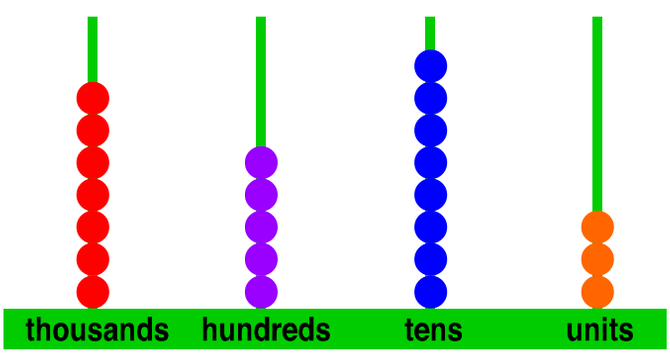
Thousands	Hundreds	Tens	Ones
		8	3

eighty-three



Thousands	Hundreds	Tens	Ones
	5	8	3

five hundred and eighty-three



Thousands	Hundreds	Tens	Ones
7	5	8	3

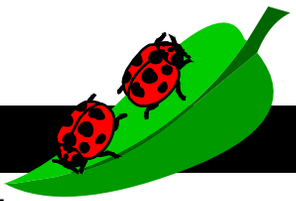
seven thousand, five hundred and eighty-three

Each place is 10x larger than the place to its right.

Reading large numbers

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Inside each large group we read the numbers as hundreds, tens and ones.



Ones can also be called units.

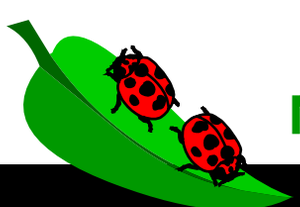
Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O
				5	3	2	7	9
			9	2	5	6	3	1
6	8	2	4	3	5	7	1	2

EXAMPLES:

- Fifty-three thousand,
  two hundred and seventy-nine.
- Nine hundred and twenty-five thousand,
  six hundred and thirty-one.
- Six hundred and eighty-two million,
  four hundred and thirty-five thousand,
  seven hundred and twelve.

Quadrillions			Trillions			Billions			Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O	H	T	O	H	T	O	H	T	O
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3

Try reading this one!!

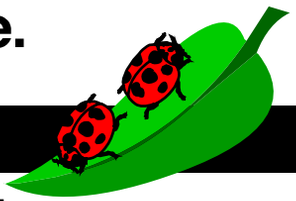


NOTE: US convention - leave out the word 'and'.

Expanding numbers 1

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Expanded notation is a way of writing numbers to show place value.



Ones can also be called units.

Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O
				5	3	2	7	9
			9	2	5	6	3	1
6	8	2	4	3	5	7	1	2

Examples

Two methods of writing expanded notation are shown for each number below.

$5 \times 10{,}000 + 3 \times 1{,}000 + 2 \times 100 + 7 \times 10 + 9$

OR $50\,000 + 3000 + 200 + 70 + 9$

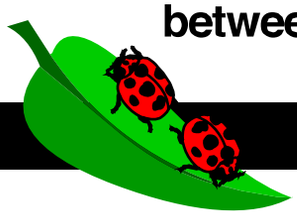
$9 \times 100{,}000 + 2 \times 10{,}000 + 5 \times 1{,}000 + 6 \times 100 + 3 \times 10 + 1$

OR $900\,000 + 20\,000 + 5000 + 600 + 30 + 1$

$6 \times 100{,}000{,}000 + 8 \times 10{,}000{,}000 + 2 \times 1{,}000{,}000$
$+ 4 \times 100{,}000 + 3 \times 10{,}000 + 5 \times 1{,}000 + 7 \times 100 + 1 \times 10 + 2$

OR $600\,000\,000 + 80\,000\,000 + 2\,000\,000$
$+ 400\,000 + 30\,000 + 5000 + 700 + 10 + 2$

NOTE:
The use of commas, spaces or points in large numbers varies between countries. In four digit numbers, they are often optional. Commas and spaces are included above.



Expanding numbers 2

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Expanded notation is a way of writing numbers to show place value.

Thousands	Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths	Thousandths	Ten-thousandths
x 1000	x 100	x 10	x 1	.	$\frac{1}{10}$ x	$\frac{1}{100}$ x	$\frac{1}{1000}$ x	$\frac{1}{10000}$ x

Examples

Two methods of writing expanded notation are shown for each number below.

$64 = (6 \times 10) + (4 \times 1)$

$64 = 60 + 4$

$964 = (9 \times 100) + (6 \times 10) + (4 \times 1)$

$964 = 900 + 60 + 4$

$4.32 = (4 \times 1) + (3 \times \frac{1}{10}) + (2 \times \frac{1}{100})$

$4.32 = 4 + 0.3 + 0.02$

$34.05 = (3 \times 10) + (4 \times 1) + (5 \times \frac{1}{100})$

$34.05 = 30 + 4 + 0.05$

$0.375 = (3 \times \frac{1}{10}) + (7 \times \frac{1}{100}) + (5 \times \frac{1}{1000})$

$0.375 = 0.3 + 0.07 + 0.005$

$967.123 = (9 \times 100) + (6 \times 10) + (7 \times 1) + (1 \times \frac{1}{10}) + (2 \times \frac{1}{100}) + (3 \times \frac{1}{1000})$

$967.123 = 900 + 60 + 7 + 0.1 + 0.02 + 0.003$

Rounding Hundreds Chart

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Round down | **Round up**

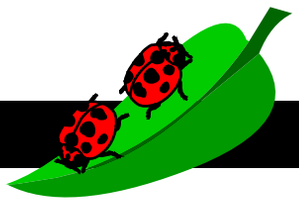
0	1	2	3	4	5	6	7	8	9	10
10	11	12	13	14	15	16	17	18	19	20
20	21	22	23	24	25	26	27	28	29	30
30	31	32	33	34	35	36	37	38	39	40
40	41	42	43	44	45	46	47	48	49	50
50	51	52	53	54	55	56	57	58	59	60
60	61	62	63	64	65	66	67	68	69	70
70	71	72	73	74	75	76	77	78	79	80
80	81	82	83	84	85	86	87	88	89	90
90	91	92	93	94	95	96	97	98	99	100

Round down | **Round up**

Rounding numbers 1

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Numbers are rounded to change them to a more convenient value.



Rounding makes it easier to estimate quickly.

to 10

Look at the **last digit** of the number.

If it is:

- 5 or more, round up to the next higher multiple of 10.
- less than 5, round down to the next lower multiple of 10.

EXAMPLES:

5786 ↑ 5790

5423 ↓ 5420

to 100

Look at the **last two digits** of the number.

If they are:

- 50 or more, round up to the next higher multiple of 100.
- less than 50, round down to the next lower multiple of 100.

5786 ↑ 5800

5423 ↓ 5400

to 1000

Look at the **last three digits** of the number.

If they are:

- 500 or more, round up to the next higher multiple of 1000.
- less than 500, round down to the next lower multiple of 1000.

5786 ↑ 6000

5423 ↓ 5000

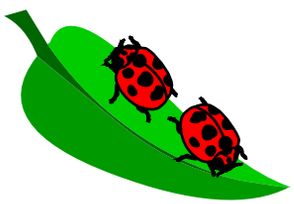
round up

round down

Rounding numbers 2

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Numbers are rounded to change them to a more convenient value.



whole numbers ← | → decimal fractions

Thousands	Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths	Thousandths	Ten-thousandths
6	9	4	5	.	3	7	2	8

The number of decimal places is the number of digits to the right of a decimal point.

A rounding instruction tells how many digits to keep.

1. Look at the digit in the place value to be rounded to.
2. Increase it by 1 if the digit to the right of it is 5 or more.
3. Leave it the same if the digit to the right of it is less than 5.
4. Remove everything to the right of the digit.

Round to the nearest ...

3 decimal places (thousandth)	6945.3728	6945.373
2 decimal places (hundredth)	6945.3728	6945.37
1 decimal place (tenth)	6945.3728	6945.4
whole number	6945.3728	6945

When rounding to 10 or above there's an important change to step 4.

4. Replace whole numbers to the right of the digit with zero(s), then remove everything to their right.

Round to the nearest ...

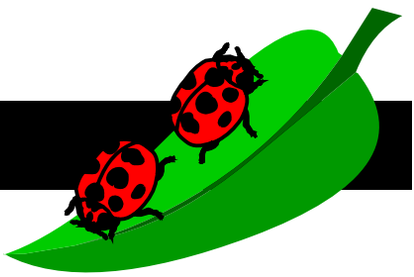
ten	6945.3728	6950
hundred	6945.3728	6900
thousand	6945.3728	7000

Rounding examples

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Original number

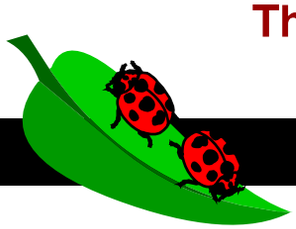
35276.538479

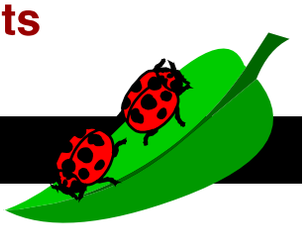


Rounded to

10	>	35280
100	>	35300
1000	>	35000
1 decimal place	>	35276.5
2 decimal places	>	35276.54
3 decimal places	>	35276.538
4 decimal places	>	35276.5385

The number of decimal places is the number of digits to the right of a decimal point.

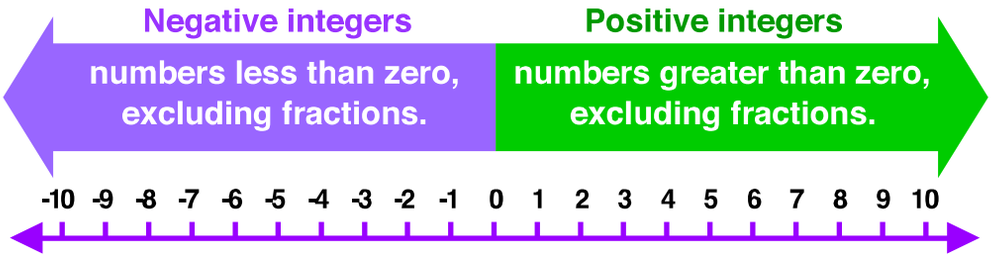




Integers

From: A Maths Dictionary for Kids by Jenny Eather at www.amathsdictionaryforkids.com

Integers are positive numbers, negative numbers and zero ... but not fractions or decimal fractions.



Operations on integers

Addition

Positive + Positive = Positive	5 + 3 = 8
Negative + Negative = Negative	(- 5) + (- 3) = - 8
* Positive + Negative or Negative + Positive	(- 5) + 3 = - 2
• subtract the smaller number from the larger number,	3 + (- 5) = - 2
• then use the sign of the larger number in the answer	(- 3) + 5 = 2
	5 + (- 3) = 2

Subtraction

Negative - Positive = Negative	(- 5) - 3 = (- 5) + (- 3) = - 8
Positive - Negative = Positive	5 - (- 3) = 5 + 3 = 8
* Negative - Negative = Negative + Positive	(- 5) - (- 3) = (- 5) + 3 = - 2
• treat as Negative + Positive	(- 3) - (- 5) = (- 3) + 5 = 2
• subtract the smaller number from the larger number,	
• then use the sign of the larger number in the answer	

Multiplication

Positive x Positive = Positive	5 x 3 = 15
Negative x Negative = Positive	(- 3) x (- 5) = 15
Negative x Positive = Negative	(- 3) x 5 = - 15
Positive x Negative = Negative	3 x (- 5) = - 15
• change double negatives to a positive	

Division

Positive ÷ Positive = Positive	15 ÷ 3 = 5
Negative ÷ Negative = Positive	(- 15) ÷ (- 3) = 5
Negative ÷ Positive = Negative	(- 15) ÷ 3 = - 5
Positive ÷ Negative = Negative	15 ÷ (- 3) = - 5
• change double negatives to a positive	