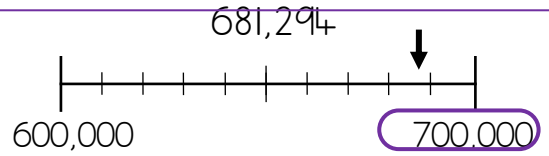
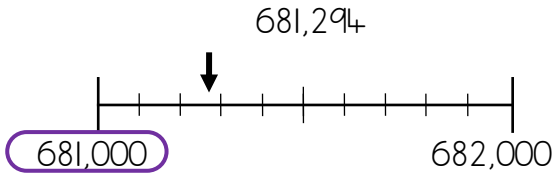
Y5- Number and Place Value

Round to the nearest 100,000



Round to the nearest 1,000

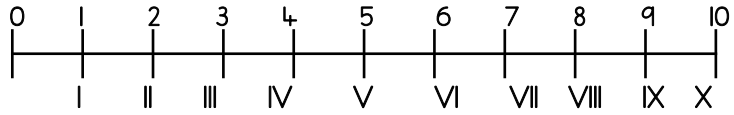


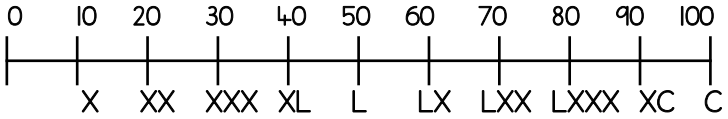
HTh	TTh	Th	H	T	O
6	8	1 ,	2	9	4
6	0	0 ,	0	0	0
	8	0 ,	0	0	0
		1 ,	0	0	0
			2	0	0
				9	0
					4

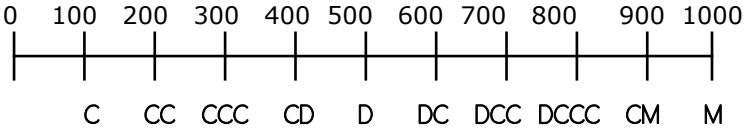
comparing numbers

<	>	=
less than	more than	equal to

681,294	<	700,000
681,294	>	600,000
681,294	=	680,000 + 1,294







ordering numbers

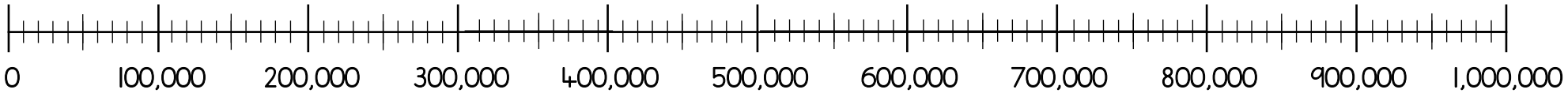
HTh	TTh	Th	H	T	O
6	8	1 ,	2	9	4
6	8	1 ,	9	2	4
6	8	1 ,	2	4	9

ascending order:

681,249 681,294 681,924

descending order:

681,924 681,294 681,249



Y5- Addition and Subtraction

column addition

	HTh	TTh	Th	H	T	O
	4	5	2	5	7	8
+		2	3	3	5	1
	4	7	5	9	2	9
				1		

column subtraction

	HTh	TTh	Th	H	T	O
	4	~~5~~ 4	12 1	5	7	8
-		2	3	3	5	1
	4	2	9	2	2	7

column addition

HTh	TTh	Th ,	H	T	O
●●●	●●● ●●	●●	●	●●● ●●● ●●	●●● ●●●
●●		●●● ●	●●● ●●		
●●● ●●●	●●● ●●●	●●● ●●●	●●● ●●●	●●● ●●● ●●	●●● ●●●

352,196 + 204,500 = 556,696

use rounding to check answers

416,493 people see a football match on Friday and 304,192 see a match on Saturday. How many people saw the match in total?

approximate answer: 420,000 + 300,000 = 720,000

actual answer: 416,493 + 304,192 = 720,685

solve addition and subtraction word problems

A factory makes 34,246 toys in January and 43,394 toys in February. It needs to make 120,000 toys in total in the first 3 months. How many does it need to make in March?

120,000		
34,246	43,394	?

34,246 + 43,394 = 77,640

120,000 – 77,640 = 42,360

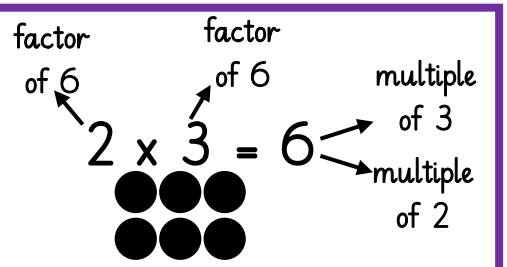
Y5- Multiplication and Division

short multiplication

		4	3	5	7
	x				6
	2	6	1	4	2
		2	3	4	

using known facts

3 x 5 = 15
30 x 5 = 150
300 x 5 = 1,500
3,000 x 5 = 15,000
0.3 x 5 = 1.5
0.03 x 5 = 0.15



Common factors of 12 and 30 are 1, 2, 3 and 6.
The highest common factor (HCF) is 6

12
1 x 12
2 x 6
3 x 4

30
1 x 30
2 x 15
3 x 10
5 x 6

multiplying by 10, 100 and 1000

TT h	Th	H	T	O	t	h
			1	2	4	5
		1	2	4	5	
	1	2	4	5		
1	2	4	5	0		

dividing by 10, 100 and 1000

TT h	Th	H	T	O	t	h
		4	2	0		
			4	2		
				4	2	
				0	4	2

A **multiple** is a number that can be divided by another without a remainder.
Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27
Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32

A **prime number** is a whole number greater than one that only has two factors - one and itself. It can't be divided by another positive integer without leaving a remainder. 2 is the only even prime number. Non-prime numbers are called **composite**.

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

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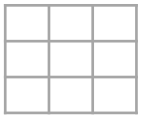
Y5- Multiplication and Division

square numbers

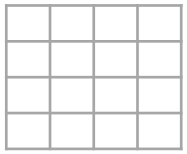
A square number is the product of multiplying a number by itself

1^2	1 x 1	1
2^2	2 x 2	4
3^2	3 x 3	9
4^2	4 x 4	16
5^2	5 x 5	25
6^2	6 x 6	36
7^2	7 x 7	49
8^2	8 x 8	64
9^2	9 x 9	81
10^2	10 x 10	100
11^2	11 x 11	121
12^2	12 x 12	144

$2^2 = 4$



$3^2 = 9$

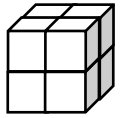


$4^2 = 16$

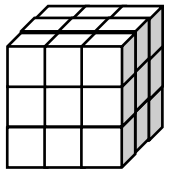
cube numbers

A cube number is the product of multiplying a number by itself, then by itself again.

1^3	1 x 1 x 1	1
2^3	2 x 2 x 2	8
3^3	3 x 3 x 3	27
4^3	4 x 4 x 4	64
5^3	5 x 5 x 5	125
6^3	6 x 6 x 6	216
7^3	7 x 7 x 7	343
8^3	8 x 8 x 8	512
9^3	9 x 9 x 9	729
10^3	10 x 10 x 10	1000
11^3	11 x 11 x 11	1331
12^3	12 x 12 x 12	1728



$2^3 = 8$



$3^3 = 27$

distributivity

Distributivity can be expressed as:

$a(b + c) = ab + ac$

example:

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

$3 \times 6 = 6 + 12$

equivalence statements

$4 \times 25 = 2 \times 2 \times 25$

$3 \times 120 = 3 \times 2 \times 6 \times 10 = 6^2 \times 10$

$4 \times 30 = 4 \times 3 \times 10$

$321 \div 4 = 80.25$

dividend divisor quotient

$\frac{321}{4} = 80.25$

short division

		0	8	0.2	5	
	4	3	2	1.0	0	
		3		1	2	

decimal
80.25

fraction
$80\frac{1}{4}$

remainder
80 r 1

missing number problems

$3 \times 120 = 360$

$3 \times \square = 360$

$360 \div \square = 120$

$\square = 120 \times 3$

$\square = 360 \div 3$

$120 = \square \div 3$