Math Homework Helper

×	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

Key Words for Word Problems:

Add: sum, increased by, altogether, plus, combined, total, in all
Subtract: difference, decreased by, how many more, minus, less, fewer than, less than, left
Multiplication: product, times, twice, of, each
Division: quotient, shared equally, divided by, per, out of, ratio

Tricks for Adding & Subtracting Integers:

Addition Tricks:

1. Keep the bigger sign, then subtract when the signs are different! (positive + negative or negative + positive)
Ex. 8 + -10 = -2 Ex. -4 + 8 = 4

2. When signs are the same, keep the sign!
Ex. (+) + (+) = (+) (-) + (-) = (-)

Subtraction Tricks:

1. Add a Negative (slash and dash)
Ex. 4 - 7 → 4 + -7 = -3
Ex. -1 - 9 → -1 + -9 = -10

2. Two Negatives Make a Positive!
Ex. -3 - (-5) → -3 + +5 = 2
Ex. 8 - (-9) → 8 + +9 = 17

Millions			Thousands			Ones			•	Decimals		
hundred millions	ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones	decimal point	tenths	hundredths	thousandths
3	9	0,	1	6	4,	7	6	5	•	5	6	8

Divisibility Rules

#	Rule
2	Last digit is even
3	Sum of the digits is a multiple of 3
4	Last two digits are a multiple of 4
5	Last digit is a 0 or 5
6	Is divisible by 2 or 3
8	Last three digits are divisible by 8
9	Sum of the digits is a multiple of 9
10	Last digit is a 0
12	Is divisible by 3 and 4

Rounding Rhyme:

0, 1, 2, 3, 4 –
Stays put, that's for sure!

5, 6, 7, 8, 9 –
Round up, and you'll be just fine!

Factors: Numbers that are multiplied together to form a number.

Example:

12
1 | 12
2 | 6
3 | 4

Factors of 12:
1, 2, 3, 4, 6, 12

Greatest Common Factor (GCF)
To find the GCF, list the factor of each number and then compare.

Example: GCF of 4 and 12

4: 1, 2, (4), 8

12: 1, 2, 3, (4) 6, 12

The GCF of 4 and 12 is 4.

Multiples: The product of a number and any whole number.

Examples:

Multiples of 2:
2, 4, 6, 8, 10, 12, 14, 16...

Multiples of 3:
3, 6, 9, 12, 15, 18, 21, 24...

Least Common Multiple (LCM)
To find the LCM, list the multiples of each number and then compare.

Example: LCM of 4 and 12

4: 4, (8) 12, 16, 20, 24

8: (8) 16, 24, 32, 40

The LCM of 4 and 12 is 8.

Prime or Composite?

A **prime number** has only 2 factors.

A **composite number** has 3 or more factors.