Math Fundamentals Review

This worksheet will help you review some fundamental math concepts. It will cover:

Divisibility	*Reducing Fractions*	*The Metric System*
Order of Operations	*Converting Improper Fractions*	*Converting Units*
Greatest Common Factor & Least Common Multiple	*Comparing Fractions*	*Solving Equations with Algebra*
Ratio & Proportion	*Multiplying & Dividing Fractions*	*Percentages*
	Adding & Subtracting Fractions	

There are questions for all these topics, along with the answers, at the back. We also have individual worksheets for each of these areas at the Learning Centre for more practice.

DIVISIBILITY

When we say that a number is **divisible** by another number, we can divide it evenly with no remainder. 35 is divisible by 7 because 35 ÷ 7 = 5 exactly. 35 is not divisible by 2, because 35 ÷ 2 = 17 with a remainder of 1. For most small numbers, there is an easy test for divisibility. You may already know how to tell if a number is divisible by 2 (an **even** number). Here's a list of divisibility rules:

	RULE	EXAMPLE
2	The last digit is even (0, 2, 4, 6, 8).	74**8** is divisible by 2.
3	The sum of the digits is divisible by 3.	342 is divisible by 3, since 3 + 4 + 2 = 9. ✓
4	The last two digits are divisible by 4.	736,2**28** is divisible by 4.
5	The last digit is 5 or 0.	3755 is divisible by 5.
6	The number is divisible by both 2 and 3.	4**38** is divisible by 6 since it's even, and 4 + 3 + 8 = 15. ✓
8	The last three digits are divisible by 8.	94,**048** is divisible by 8.
9	The sum of the digits is divisible by 9.	347,868 is divisible by 9 since 3 + 4 + 7 + 8 + 6 + 8 = 36; 3 + 6 = 9. ✓
10	The last digit is 0.	87,226,34**0** is divisible by 10.

The divisibility rules for 3, 6 and 9 can be applied as many times as needed to find out whether a large number is divisible by these factors.

Exercises on divisibility are on page 12.

ORDER OF OPERATIONS

When evaluating an expression, we must follow order of operations. Order of operations is also sometimes known as the BEDMAS rule. The order is:

B	**B**rackets first, then
E	**E**xponents, then
DM	**D**ivision and **M**ultiplication, then
AS	**A**ddition and **S**ubtraction.

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