

Appendix A  
Vocabulary Definitions

Addend	A number to be added to another.  <i>Addend + addend = sum</i>
Aggregation	An addition which asks for two or more separate groups to be totalled 'altogether' but never brought into one physical group.  <i>I have 4 sweets. Bob has 5 sweets. How many sweets do we have altogether?</i>
Augmentation	An addition which asks for one quantity to be 'grown' or increased.  <i>I have 4 sweets. Bob gives me 3 more. How many do I have now?</i>
Augend	The amount that something is increased by in an augmentation.  <i>I have 4 sweets. Bob gives me 3 more. How many do I have now?</i>  <i>3 is the augend.</i>
Cardinality	Counting a quantity, saying each number and recognising that the final number spoken is the amount.
Commutative	Addition and multiplication of real numbers are commutative where $a + b = b + a$ and $a \times b = b \times a$ for all real numbers $a$ and $b$ . It follows that, for example, $2 + 3 = 3 + 2$ and $2 \times 3 = 3 \times 2$ . Subtraction and division are not commutative since, as counter examples, $2 - 3 \neq 3 - 2$ and $2 \div 3 \neq 3 \div 2$ .
Difference	The result of subtracting the subtrahend from the minuend.
Dividend	In division, the number that is divided. E.g. in $15 \div 3$ , 15 is the dividend
Divisor	The number by which another is divided. Example: In the calculation $30 \div 6 = 5$ , the divisor is 6. In this example, 30 is the dividend and 5 is the quotient.
Minuend	The first number, or starting quantity, in a subtraction problem.  <i>Minuend – Subtrahend = difference</i>

Multiplicand	A number to be multiplied by another. e.g. in $5 \times 3$ , 5 is the multiplicand as it is the number to be multiplied by 3.
Product	The result of a multiplication problem.  <i><math>3 \times 4 = 12</math>. 12 is the product.</i>
Quotient	The result of a division. Example: $45 \div 3 = 15$ and 15 is the quotient of 45 by 3.
Reduction	A subtraction which asks you to reduce a total value, such as:  <i>I have 7 sweets. I give 3 sweets to Bob – how many do I have now?</i>
Subitise	To recognise a quantity by sight as opposed to counting every individual item.
Subtrahend	A number to be subtracted from another.