Grammar Basics

GRAMMAR

Nouns are words used to name persons, animals, places and things.
Words used to name ordinary things, such as a table or pen, are called **common nouns.**
*e.g. An **astronomer** uses a **telescope**.*

Proper nouns are words used to name particular people, places or things. They begin with a capital letter.
*e.g. Australia's longest river is the **Murray River.***

Collective nouns are words used to name groups of things or people that are the same.
*e.g. There was a **swarm** of bees in the garden.*

Abstract nouns are used to name feelings or ideas.
e.g. happiness, anger, impatience

Pronouns are words used to refer to a person or thing without giving it a name.
*e.g. Jane said that **she** would be back soon.*

Adjectives are words used to describe a noun.
*e.g. The **young** man bought a pair of **brown** shoes.*

Verbs are 'doing, being or having' words because they describe an action, state or condition.
*e.g. Gabby **is swimming** in her race.*

Adverbs add to the meaning of verbs. They usually tell us how, when, where or why.
*e.g. Robert walked **slowly** because he was tired.*

Articles are short words placed in front of a noun such as 'the', 'a' and 'an'.
*e.g. Leanne is cleaning **the** desk with **a** rag.*

Prepositions are very short words that show the relationship between pronouns and/or nouns.
*e.g. over, with, by, at, in, for, to – John fell **on** the floor; Mary sat **in** the car.*

Conjunctions are words that join words or parts of a sentence.
*e.g. 'and', 'or', 'but', 'so', 'as' – Apples **and** pears grow on trees.*

Interjections are words that interrupt other words or phrases, and are generally followed by an exclamation mark.
*e.g. "**Oh!** I forgot all about our maths test today!" exclaimed Moe.*

Prefixes are groups of letters put at the front of a word to change its meaning.
*e.g. (pre-, anti-, dis-, un- counter-, ir-, super-): Mrs Lee **dis**approves of her students' **ir**responsible behaviour. It makes her **un**happy.*
Suffixes are groups of letters put at the end of a word and change it to another part of speech. The spelling of the word often changes.
*e.g. Quiet – quie**tly** – changed from an adjective to an adverb; Repeat, repet**ition** – changed from a verb to a noun and includes a spelling change.*

Abbreviations are shortened forms of words or phrases.
e.g. QLD – Queensland

Acronyms are types of abbreviations. They are words formed using the first letters from other words or phrases.
e.g. ANZAC – Australian and New Zealand Army Corps

Vowels are the letters a, e, i, o, u.

Consonants are the other letters of the alphabet besides a, e, i, o, u.

Similes are figures of speech that compare two things, using the words **'like'**, **'as'** or **'than'**. Similes that are overused are called *clichés.*
e.g. She was as big as Texas.

Metaphors are figures of speech where one thing is described as something else in order to suggest a comparison. Unlike a simile, they use the word **is.**
*e.g. Jude's stomach **is** a bottomless pit.*

Homophones are words that sound the same but have different spelling and meaning.
e.g. There, their, they're; to, too, two; bare, bear; through, threw; sore, saw.

Synonyms are words that have the same meaning but different spelling.
e.g. happy, content; shut, close; leave, vacate.

PUNCTUATION

Full Stop (.) is used to end a sentence.

e.g. We have reached the end of the road**.**

Comma (,) is used to separate a series of words or phrases.

e.g. Simone cooked a big breakfast of toast, eggs, sausages, baked beans and bacon for her family.

Question Mark (?) is used at the end of a question.

*e.g. What would you like to do on Friday night***?**

Exclamation Mark (!) is used to describe a point strongly.

*e.g. The concert was incredible***!**

Quotation Marks ("") are used to indicate speech or a direct quotation.

*e.g. **"**The police still do not have any leads in the case**"**, said the newsreader.*

Apostrophe (') is used to shorten a word or show ownership.

e.g. Please don't disturb anything in Phong's bedroom.

Semi-colon (;) is used between sentences where there is a close connection.

e.g. Lara had a wonderful time at the beach; it was incredibly hot there.

Colon (:) is used to begin a statement or to start a list.

*e.g. The shopping list read***:** *eggs, milk, butter, flour and sugar.*

THE FIVE SIMPLE RULES OF SPELLING

RULE 1: I BEFORE E EXCEPT AFTER C

This rule helps us remember how to spell words such as receive and friend:

e.g. achieve, believe, brief, hygiene, grief, thief, grieve, patience, priest

e.g. ceiling, conceive, deceive, perceive, receipt, receive, deceit

The rule doesn't work with words pronounced 'ay' as in *neighbour, freight, beige, sleigh* and *weigh* and there are **exceptions** to the rule: *either, neither, feint, foreign, forfeit, height, leisure, weird, seize*, and *seizure.*

RULE 2: DROPPING THE FINAL E

If you add an ending to a word that ends with a silent e, drop the final e if the ending begins with a vowel:

e.g. surprising, advancing

Exceptions: If the ending begins with a consonant, keep the final e:

e.g. advancement, likeness

If the silent e is preceded by another vowel, drop the e when adding any ending:

e.g. argument, argued, truly

Exceptions: the final e is kept in words where the final e is preceded by a soft g or c: e.g. changeable, courageous, manageable, management, noticeable.

RULE 3: DROPPING THE FINAL Y

When adding an ending to a word that ends with y, change the y to i when it is preceded by a consonant.

e.g. supply becomes supplied, worry becomes worried

Exceptions: This does not apply to the ending -ing, or when the final y is preceded by a vowel:

e.g. crying, studying

e.g. obeyed, saying

RULE 4: DOUBLING FINAL CONSONANTS

As a general rule, you double the final consonant of a word before you add **-ed, -er, -est, -ing, -able** and **-y** to show that the vowel has a short sound.

e.g. submit becomes submitted.

But how do you know when to double the consonant and when not to?

Step 1. Ensure that the word ends in a consonant. You can only double a consonant if it comes at the end of a word. *e.g. Stop becomes stopped or stopping whereas slope becomes sloped or sloping.*

Step 2. Check that the second last letter of the word is a vowel (a, e, i, o or u). If it is not, you cannot double the last consonant. *e.g. Dig becomes digging whereas relent becomes relented or relenting.*

Step 3. Make sure that the third last letter from the end of the word is a consonant. If it is a vowel, do not double the consonant. *e.g. Flap becomes flapping whereas deal becomes dealing.*

Step 4. Look at how many syllables the word contains. If it contains only one syllable and meets all the above criteria you are able to double the consonant. *e.g run becomes running.*

Step 5. If the word contains more than one syllable you can only double the consonant if the last syllable is stressed: *e.g. unplug becomes unplugged or unplugging.*

If the last syllable is unstressed do not double the consonant: *e.g. happen becomes happened or happening.*

RULE 5: ADDING PREFIXES

As a general rule, if you add a prefix to a word, it will not change its spelling: *e.g. unnecessary, dissatisfied, disinterested, misinform.*

Maths Laws, Formulae & Symbols

Order of Operation follows this rule:

B	O	D	M	A	S
Brackets	of	Division		Addition	
			Multiplication		Subtraction
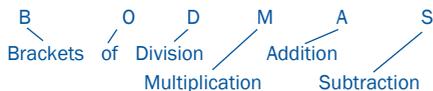
- If there are just additions and subtractions, work from left to right.
- If there are just multiplications and divisions, work from left to right.

SYMBOLS

Equality and Inequality Signs

=	....	is equal to
<	....	is less than
>	....	is greater than
≤	....	is less than or equal to
≥	....	is greater than or equal to
≮	....	is not less than
≯	....	is not greater than
≠	....	is not equal to
≡	....	is equivalent to
≈	....	is approximately equal to
≅	....	is congruent to
α	....	is proportional to
∴	....	therefore
%	....	percentage
d_{ST}	....	the length of Interval ST
M^{ST}	....	the gradient of ST
Σ	....	the sum of

INDICES

( )^n	....	to the power n
√	....	square root

INDEX LAWS

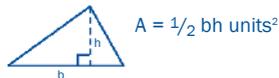| Ist Law	$a^x \times a^y = a^{x+y}$
2nd Law	$a^x \div a^y = a^{x-y}$
3rd Law	$a^0 = 1$
4th Law	$(a^x)^y = a^{xy}$
5th Law	$(a \times b)^x = a^x \times b^x$
6th Law	$(^a/_b)^x = ^{a^x}/_{b^x}$

ANGLES

- Acute Angles, 0° to 90°
- Right Angles, 90°
- Obtuse Angles, 90° to 180°
- Straight Angles, 180°
- Reflex Angles, 180° to 360°
- Revolution, 360°

PERIMETER is the distance around the outside of a figure.
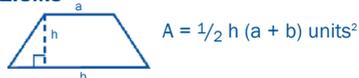
AREA is in units^2 or square units.

TRIANGLES

$A = \frac{1}{2}$ bh units^2

RECTANGLES

$A = lw$ units^2

SQUARES

$A = S^2$ units^2

TRAPEZIUMS

$A = \frac{1}{2} h (a + b)$ units^2

VOLUME is in units^3 or cubic units.

BOX

$V = Lwh$ units^3

CYLINDER

$V = \Pi r^2 h$ units^3

CONE

$V = \frac{1}{3} \Pi r^2 h$ units^3

SPHERE

$V = \frac{4}{3} \Pi r^3$ units^3
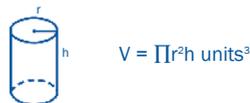
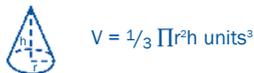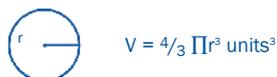**PARALLEL LINES** are shown by arrows on the lines.
- the line that cuts the parallel lines is called the Transversal.

VERTICALLY OPPOSITE ANGLES

a = c, b = d, e = g, h = f

ALTERNATE ANGLES

c = e, d = f

CORRESPONDING ANGLES

b = f, c = g, a = e, d = h

COINTERIOR ANGLES

c + f = 180°   d + e = 180°

These angles only apply to parallel lines.

STANDARD FORM is given by:

(a number between 1 & 10) × (Power of 10)

Ex. 456.7 = 4.567×10^2

STATISTICS

Measures of **Central Tendency**

- **Mean**, x is the average.
- **Mode** is the most common value.
- **Median** is the middle value when the data is put in order.
- **Frequency** is how often a value occurs.
- **Standard Deviation**, SD is the spread around the Mean.
- **Range** is the difference from the largest to the smallest value.
- **Boxplots** and **Interquartile Ranges** show the spread of data around the Median.

TYPES OF TRIANGLES

3 sides and angles to 180°

Scalene
3 sides
3 angles } different

Isosceles
2 sides
2 angles } equal

Equilateral
3 sides
3 angles

Right-angled
has a 90° angle

TYPES OF QUADRILATERALS

4 sides and angles add to 360°

Irregular
4 sides
4 angles } different

Kite
2 pairs of adjacent sides
1 pair of opposite angles } equal

Rectangle
4 right angles
2 pairs of sides equal

Rhombus
4 sides equal
2 pairs of sides equal

Parallelogram
Opposite sides equal and parallel
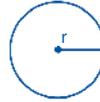2 pairs of angles equal

Square
4 right angles
4 sides equal

Trapezium
1 pair of opposite sides parallel

OTHER POLYGONS

- Pentagon .... 5 sides
- Hexagon .... 6 sides
- Heptagon .... 7 sides
- Octagon .... 8 sides
- Nonagon .... 9 sides
- Decagon .... 10 sides
- the number of degrees in a polygon is given by $(2n - 4) \times 90°$ where n is the number of sides

THE CIRCLE

- The Perimeter of a circle is called the circumference, C

  $C = \pi d$

  or $C = 2\pi r$
- The Area, A, of a circle is $A = \pi r^2$
- There are 360 degrees in a circle and 180 degrees in a semi-circle.

FACTORS

Are numbers that multiply together to give a certain number ex. $24 = 24 \times 1 = 12 \times 2 = 8 \times 3 = 6 \times 4$

Factors are 1, 2, 3, 4, 6, 8, 12, 24

MULTIPLES

Are numbers produced when a certain number is multiplied by 1, 2, 3, 4, 5, e.g. 3, 6, 9, 12, 15 are multiples of 3.

PRIME NUMBERS

Are numbers that only have themselves and one as factors, e.g. The factors of 23 are only 1 and 23, that is, $23 = 23 \times 1$.

The first 20 Prime Numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71.

ALGEBRA

Letters which represent numbers are called pronumerals. e.g.

$4a = 3 + 3 + 3 + 3 = 4 \times 3$

$ab = a \times b$

$3mn = 3 \times m \times n$

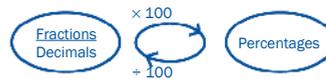## DISTRIBUTIVE LAW

is expanding brackets $a(b + c) = ab + ac$

POSITIVES AND NEGATIVES

$+ \times + = +$ $- \times - = +$ $+ \times - = -$

The same pattern exists for ÷ also.

PERCENTAGES %

Percentages are all out of 100.

Fractions Decimals $\xrightarrow{\times 100}_{\div 100}$ Percentages

STATISTICAL GRAPHS

The main two types of graphs used to show statistical results are:

Pie Chart (Sector Graph)   Bar Graphs, Column or Histograms

Other 10%
Sunflowers 20%
Wool 30%
Wheat 40%

Each 1% = 3.6°

Number of Students
20
15
10
5
0 10 20 30 40 50
Mar