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| **Topic/Skill**  | **Definition/Tips** | **Example** |
| 1. Expression | A mathematical statement written using **symbols**, **numbers** or **letters**, | $$3x + 2 or 5y^{2}$$ |
| 2. Equation | A statement showing that **two expressions are equal** | $$2y – 17 = 15$$ |
| 5. Simplifying Expressions | **Collect ‘like terms’.** Be careful with negatives. $x^{2}$ and $x$ are not like terms. | $$2x+3y+4x-5y+3=6x-2y+3$$$$3x+4-x^{2}+2x-1=5x-x^{2}+3$$ |
| 6. $x $times $x$ | The answer is $x^{2}$ not $2x$. | Squaring is multiplying by itself, not by 2. |
| 7. $p×p×p$  | The answer is $p^{3}$ not $3p$ | If $p=2$, then $p^{3}$=$2×2×2=8$, not $2×3=6$ |
| 8. $p+p+p$  | The answer is 3p not $p^{3}$ | If $p=2$, then $2+2+2=6$, not $2^{3}=8$ |
| 9. Expand | To expand a bracket, **multiply** each term **in the bracket** by the expression **outside** the bracket. | $$3\left(m+7\right)=3x+21$$ |
| 10. Factorise | The **reverse** of **expanding**.Factorising is writing an expression as a product of terms by ‘**taking out’ a common factor** or **highest common factor** | $6x-15=3(2x-5)$, where 3 is the common factor.$3x^{2}y^{2}+9xy=3xy(xy+3)$, where $3xy$ is the highest common factor. |
| 11. Solve | To find the **answer**/value of something**Use inverse operations** on both sides of the equation (balancing method) until you find the value for the letter. | Solve $2x-3=7$Add 3 on both sides$$2x=10$$Divide by 2 on both sides$$x=5$$ |
| 12. Writing Formulae and Equations | **Substitute letters for words** in the question. | Bob charges £3 per window and a £5 call out charge.$$C=3N+5$$Where N=number of windows and C = cost |