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| **Topic/Skill**  | **Definition/Tips** | **Example****Topic: Equations and Formulae**  |
| 1. 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$$x=5$$ |
| 2. Inverse | **Opposite** | The inverse of addition is subtraction.The inverse of multiplication is division. |
| 3. Rearranging Formulae | **Use inverse operations** on both sides of the formula (balancing method) until you find the expression for the letter. | Make x the subject of $y=\frac{2x-1}{z}$Multiply both sides by z$$yz=2x-1$$Add 1 to both sides$$yz+1=2x$$Divide by 2 on both sides$$\frac{yz+1}{2}=x$$We now have x as the subject. |
| 4. Writing Formulae | **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 |
| 5. Substitution | **Replace letters with numbers**.Be careful of $5x^{2}$. You need to square first, then multiply by 5. | $a=3, b=2 and c=5.$ Find:1. $2a=2×3=6$ 2. $3a-2b=3×3-2×2=5$3. $7b^{2}-5=7×2^{2}-5=23$ |

**Knowledge Organiser**