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| **Topic/Skill** | **Definition/Tips** | **Example** |
| 1. Expression | A mathematical statement written using **symbols**, **numbers** or **letters**, |  |
| 2. Equation | A statement showing that **two expressions are equal** |  |
| 5. Simplifying Expressions | **Collect ‘like terms’.**  Be careful with negatives.  and are not like terms. |  |
| 6. times | The answer is not . | Squaring is multiplying by itself, not by 2. |
| 7. | The answer is not | If , then =, not |
| 8. | The answer is 3p not | If , then , not |
| 9. Expand | To expand a bracket, **multiply** each term **in the bracket** by the expression **outside** the bracket. |  |
| 10. Expanding Double Brackets | To multiply out a pair of double brackets, **multiply** each term **in the first brackets** by each term in the **second** **brackets**. |  |
| 11. Expanding Triple Brackets | To multiply out triple brackets, **multiply** each term **in the first brackets** by each term in the **second** **brackets**. Then **multiply** this **answer** by each term in the **third brackets.** |  |
| 12. 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** | , where 3 is the common factor.  , where is the highest common factor. |
| 13. 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  Add 3 on both sides  Divide by 2 on both sides |
| 14. Writing Formulae and Equations | **Substitute letters for words** in the question. | Bob charges £3 per window and a £5 call out charge.  Where N=number of windows and C = cost |
| 15. Quadratic | A quadratic expression is of the form  where and are numbers, | Examples of quadratic expressions:  Examples of non-quadratic expressions: |
| 16. Factorising Quadratics | When a quadratic expression is in the form find the two numbers that **add to give b** and **multiply to give c**. | (because 5 and 2 add to give 7 and multiply to give 10)  (because +4 and -2 add to give +2 and multiply to give -8) |
| 17. Factorising Quadratics when | When a quadratic is in the form  1. Multiply a by c = ac  2. Find two numbers that add to give b and multiply to give ac.  3. Re-write the quadratic, replacing with the two numbers you found.  4. Factorise in pairs – you should get the same bracket twice  5. Write your two brackets – one will be the repeated bracket, the other will be made of the factors outside each of the two brackets. | Factorise  1.  2. Two numbers that add to give +5 and multiply to give -24 are +8 and -3  3.  4. Factorise in pairs:  5. Answer = |