|  |  |  |
| --- | --- | --- |
| **Literacy**  Index, power, exponent, product, expand, factor, quadratic | **Research**  The binomial expansion can be used to expand brackets quickly. Find the binomial expansion and attempt to use it to expand (x + y)4 | **Memory**  Difference of two squares:  There is only one bracket with a negative term which is a square number |
| **Skills**   1. Simplify 2. Simplify 3. Simplify 4. Expand and simplify (x – 7)2 5. Expand and simplify (2x + 3y – 5)(8 – x) 6. Expand and simplify (x + 3)(x – 1)(x + 5) 7. Factorise 8x2y + 12xy 8. Factorise 6x2 + 2x 9. Factorise x2 + 10x + 21 10. Factorise 16x2 – 81y2 | | **Stretch**   1. Given that (3x + 2y)(5x – y)(2x + y) = ax3 + bx2 y+ cxy2 + dy3, where a, b, c and d are constants, find the values of a, b, c and d 2. Expand and simplify (x + 3)5 3. Factorise completely   8x3 – 4x2 + 12x   1. Factorise completely 6x3 – x2 – 2x 2. Write 4x4 – 17x2 + 4 as the product of four linear factors |

**Algebraic Manipulation Homework**