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| **\*Trial and improvement.**  has a solution between 4 and 5. Use trial and improvement to find a solution to 1dp.  has a solution between 2 and 3. Use trial and improvement to find a solution to 1dp. | **Substitution.**  D = 3s – 7t  If s = -4, t = 2. Work out the value of D.  E = T2 -2T  Find the value of E when T = -3.  If P = -4 and Q = 30, work out the value of ‘M’ | **Expand and/or simplify.**   1. 5p – 4q + 3p + q 2. 4(3x +2) 3. 4(x + 5) + 3(x – 7) 4. 3(2x – 1) – 2(2x – 3) 5. (x + 7)(x – 4) 6. (x + 3y)(x + 2y) | **Factorise.**   1. 2t + 6 2. 8s – 12t 3. 6a – 12b + 30 4. 8x + 12y – 16z 5. y2 + y 6. 2x + 3ax3 |
| **Straight line graphs.**  A straight line passes through (0, 5) and (3, 17). Find the equation of the line.  A straight line has the equation  y = 2(3 - 4x).  Find the gradient and y-intercept of the line. | **Index Laws.**  Simplify | **Nth terms.**  Find the nth term and the 50th term of these sequences...   1. 2, 7, 12, 17, 22, ... 2. 22, 19, 16, 13, 10, ...   The nth term of a number sequence is given by (5 – n2). Find   1. The first five terms of the sequence 2. The 10th term 3. The 12th term | **Construct an equation.**  The cost of hiring a car for *n* days is *C* pounds. Write down a formula for *C* in terms of *n.*  Red cards are worth 5 points each.  Green cards are worth 3 points each.  We have *r* red cards and g green cards.  If our total number of points is *N,* Write down, in terms of *r* and g, a formula for *N.* |
| **Plot graph of a quadratic equation.**  Copy and complete the table of values for y = x2 + x.    Draw the graph of y = x2 + x from x = -3 to x = 3. | **Inequalities.**  -6 < y < -3. If ‘y’ is an integer, write all its possible values.  Solve the inequalities   1. 3x + 2 > -7 2. 4x – 3 < 7   Write the inequality represented by ... | **Solve these linear equations.** | **Rearranging algebraic expressions.**  Make ‘t’ the subject of the formula  Make ‘a’ the subject of the formula |

\*Calculator allowed