**Algebra homework –** Stick the worksheet into your book neatly and answer these questions in your book.

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| **Literacy**  You should know the spelling and understand the meaning of these words  Solve, Numerator  Denominator, Simplify  Factorise, Expand  Variable, Coefficient  Expression, Formula | **Research**  Research at least five careers where you would need to use equations (excluding teaching!) and explain why equations would be important. | **Memory and reminder**  Letters in algebraic expressions should be expressed in alphabetical order, unless there is a negative  e.g. we write “2a + 3h + r” or “y – 3x”.  Where there is a coefficient of 1, there is no need to write the “1” – e.g. we write “y” and not “1y”.  Pythagoras theorem – for right angle triangles  a2 + b2 = h2  a  h  b |
| **Skills Practice**  Work out the value of these expressions   1. Simplify by collecting like terms: 2. 5p – 2p b) 7y – 9y c) 8t + 3i – 6t –I d)8h – (3h + 3k) 3. Simplify the following expressions: 4. 3ab x 2b b) 5b2y x 7b2y c) 10h2k2 ÷ 5hk d) 4r2 ÷ h 5. Expand: 6. 3(x + 5) b) 4(5x – 2) c) -3(7+5y) d) -8(5x – 6) e) 9x(3x + 4) 7. Expand and simplify 8. 3(x + 5) - 9 b) 4(5x – 2) + 11x – 5 c) -3(7 + 5y) + 9y - 10   d) -8(5x – 6) + 24 e) 9x(3x + 4) + 5x2 -7x | | **Challenge** **and** **Stretch**  How much effort did you put into your homework? Give yourself a mark out of 10 for effort.  / 10   1. The number x is an integer. 2. Write in algebraic terms, the next two integers greater than x. 3. Write an expression for the total, T when you add x to the next two integers. 4. PROVE that T is always a multiple of 3. |