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| **Literacy**expression, equation, brackets, expand, factorise. | **Research****Algebraic Manipulation Homework**Research the French mathematician François Viète and his contributions to algebra. | **Memory**$$a\left(bx+c\right)=abx+ac$$$$ax+by+cx+dy=\left(a+c\right)x+\left(b+d\right)y$$ |
| **Skills**1. Expand the following brackets:
2. $2\left(3x+5\right)$ b) $x\left(2x-4\right)$ c) $3x(4x+6)$
3. Write an expression for the perimeter of this shape.

1. Expand and simplify $2\left(3x+3\right)-4(4x-1)$
2. Expand the following pairs of brackets.
3. $(x+3)(x+2)$ b) $\left(x+5\right)\left(x-4\right)$ c) $(2x-4)(-3x+2)$
4. Solve the two equations below
5. $3x+4=13$ b) $2x+6=2$ c) $3\left(x-2\right)=9$
 | **Stretch**Go to [www.wolframalpha.com](http://www.wolframalpha.com) and type in the search box “solve x-2=3”. How many solutions do you have? Now type “solve x^2+x-6=0”. How many solutions do you have this time? Finally type “solve x^3-x^2-14x+24=0”, how many solutions do you have?What do you notice about the number of solutions and the highest power of x in the equations?How many solutions do you think $x^{5}-x^{4}-9x^{3}+13x^{2}+8x-72$ = 0 |