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| Factors by Grouping 'Two and Two' |

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| http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1850.gif  Now, consider the expression 7*x* + 14*y* + *bx* + 2*by*.  Clearly, there is no [factor](http://www.mathsteacher.com.au/year9/ch08_factors/01_factors/number.htm#factors) common to every term.  However, it is clear that 7 is a [common factor](http://www.mathsteacher.com.au/year9/ch08_factors/01_factors/number.htm#M1) of the first two terms and *b* is a common factor of the last two terms.  So, the expression can be grouped into two pairs of two terms as shown.  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1851.gif  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1852.gif  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1853.gif  This factorisation technique is called grouping**'Two and Two'**; and it is used to factorise an expression consisting of four terms.  Example 8  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1854.gif  *Solution:*  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/factor25.gif  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1856.gif  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1857.gif  http://www.mathsteacher.com.au/year9/ch08_factors/04_grouping/Image1858.gif |