

Factorising Unitary Trinomials

1. i) Find the two expressions that have been multiplied together and
 ii) Complete to find the expression in it's simplest form.

<p>a.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="padding: 5px;">x^2</td><td style="padding: 5px;">$3x$</td></tr> <tr><td style="padding: 5px;">$5x$</td><td style="padding: 5px;"></td></tr> </table>	x^2	$3x$	$5x$		<p>b.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="padding: 5px;">x^2</td><td style="padding: 5px;">$-7x$</td></tr> <tr><td style="padding: 5px;">$4x$</td><td style="padding: 5px;"></td></tr> </table>	x^2	$-7x$	$4x$		<p>c.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="padding: 5px;">x^2</td><td style="padding: 5px;">$7x$</td></tr> <tr><td style="padding: 5px;">$-4x$</td><td style="padding: 5px;"></td></tr> </table>	x^2	$7x$	$-4x$							
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2. Using the area model, factorise each of the following

- | | | |
|---------------------|---------------------|---------------------|
| a. $x^2 + 12x + 36$ | b. $x^2 + 13x + 36$ | c. $x^2 + 15x + 36$ |
| d. $x^2 + 15x + 56$ | e. $g^2 + 15g + 56$ | f. $g^2 + 9g + 18$ |
| g. $h^2 + 11x + 24$ | h. $m^2 + 10m + 24$ | i. $p^2 + 10x + 21$ |

3. Factorise:

- | | | |
|---------------------|---------------------|---------------------|
| a. $x^2 - 12x + 36$ | b. $x^2 - 15x + 36$ | c. $x^2 - 15x + 50$ |
| d. $f^2 - 9f + 8$ | e. $x^2 - 9x + 20$ | f. $j^2 - 7j + 12$ |
| g. $n^2 - 12n + 35$ | h. $u^2 - 12u + 32$ | i. $q^2 - 8q + 15$ |

4. Factorise fully:

- | | | |
|--------------------|--------------------|--------------------|
| a. $x^2 + 5x - 36$ | b. $x^2 - 5x - 36$ | c. $x^2 + 9x - 36$ |
| d. $k^2 - k - 20$ | e. $r^2 + 8r - 20$ | f. $y^2 - 3y - 54$ |
| g. $z^2 + 5z - 36$ | h. $d^2 - 8d - 33$ | i. $g^2 + 4g - 45$ |

5. Factorise each of the following

- | | | |
|---------------------|---------------------|--------------------|
| a. $y^2 + 12y + 20$ | b. $k^2 - 12k + 32$ | c. $h^2 + 7h - 18$ |
| d. $y^2 - 6y - 27$ | e. $s^2 + 8s + 16$ | f. $w^2 - 4w - 32$ |