Factorising

A factor is a number that will go into another without leaving a remainder. Factorising means looking for a common factor, which can be a letter, a number or both, and taking it outside the brackets.

Example 1	Example 2	Example 3
$3x + 6$ $3(x + 2)$ The common factor is 3.	$x^2 - 2x$ $x(x - 2)$ The common factor is x.	$2x^2 - 4x$ $2x(x - 2)$ The common factor is 2x

Factorise these expressions.

1. $4x - 12$
2. $25p + 5$
3. $8a + 4$
4. $ab + a$
5. $3x + 12y$
6. $120x + 6$
7. $4a + 12b$
8. $3x + 6y + 12z$
9. $10 - 5y$
10. $12p - 3q$
11. $5x^2 + 4x$
12. $3y - 6y^2$
13. $4b^2 + b$
14. $3z - z^2$
15. $p^2 - 2p$
16. $n - n^2$
17. $m^2 + 2m$
18. $a^3 + a$
19. $2x^3 + 3x$
20. $4y^4 + 3y^3$
21. $6x^2 + 3x$
22. $4y^2 - 8y$
23. $5x - 15x^2$
24. $9b^2 + 3b$
25. $4xy^3 + 12y$
26. $6p - 9p^3$
27. $a^2b + ab$
28. $3p^2q + 2pq$

This worksheet is available in interactive and paper formats at www.mathswithgraham.org.uk