Solving Quadratic Equations

Solve each of the following quadratic equations using an appropriate method. For non-integer solutions, give answers to 3sf.				
$x^2 - 9x + 14 = 0$ $x = 7 \text{ or } x = 2$	$2x^2 + 3x + 1 = 0$ $x = -\frac{1}{2} \text{ or } x = -1$	$x^2 + 2x - 8 = 0$ $x = -4 \text{ or } x = 2$	$2x^2 + 6x + 1 = 0$ $x = -0.177$ $\text{or } x = -2.82$	$x^2 + 10x + 21 = 0$ $x = -7 \text{ or } x = -3$
$x^2 - x - 6 = 0$ $x = 3 \text{ or } x = -2$	$x^2 - 9x = 0$ $x = 0 \text{ or } x = 9$	$x^2 - 7x + 2 = 0$ $x = 6.70$ $\text{or } x = 0.298$	$x^2 + 2x + 1 = 0$ $x = -1$	$x^2 - 11x - 60 = 0$ $x = 15 \text{ or } x = -4$
$x^2 - 9 = 0$ $x = 3 \text{ or } x = -3$	$2x^2 - 9x = 0$ $x = 0 \text{ or } x = \frac{9}{2}$	$5x^2 - 2x - 80 = 0$ $x = 4.20$ $\text{or } x = -3.80$	$5x^2 - 80 = 0$ $x = 4 \text{ or } x = -4$	$5x^2 + 42x - 80 = 0$ $x = \frac{8}{5} \text{ or } x = -10$
Find one or more quadratic equations that satisfies each of the following conditions. Can you generalise?				
There are two integer solutions, one positive and one negative. $for\ example$ $x^2 + x - 6 = 0$	There are two solutions, but the equation cannot be solved by factorising. $for\ example$ $x^2 + 3x + 1 = 0$	There are two solutions and one of them is zero. $for\ example$ $x^2 + 6x = 0$	There are two fractional solutions, where one is twice the other. $for\ example$ $(3x - 1)(3x - 2) = 0$	The equation cannot be solved by any method (I know so far…) $for\ example$ $x^2 + x + 10 = 0$