GENERAL QUADRATIC EQUATIONS

Solve:

1 $x^2 - 3x + 2 = 0$ **2** $x^2 - 6x + 5 = 0$ **3** $x^2 - 2x - 8 = 0$

① 1 is an obvious solution, so we can factorise by $(x-1)$

$x^2 - 3x + 2 = 0 \iff (x-1)(x-2) = 0$

so either $x = 1$ or $x = 2$

② 1 is an obvious solution, so the quadratic expression can be factorised by $(x-1)$

$x^2 - 6x + 5 = 0 \iff (x-1)(x-5) = 0$

so the solutions are $x = 1$ and $x = 5$

③ $x = -2$ is an obvious solution, so the quadratic expression can be factorised by $(x+2)$

$x^2 - 2x - 8 = 0 \iff (x+2)(x-4) = 0$

so either $x = -2$ or $x = 4$

GENERAL QUADRATIC EQUATIONS

18 $x^2 - 8x + 16 = 0$ **19** $5x^2 + 26x + 24 = 0$ **20** $3x^2 - 41x + 60 = 0$

(18) 1 -1 2 -2 4 -4
16 -16 8 -8 4 -4

$x^2 - 8x + 16 = 0 \iff (x-4)^2 = 0$

so $x = 4$

(19) $5x^2 + 26x + 24 = 0 \iff (x+4)(5x+6) = 0$

so either $x = -4$ or $5x + 6 = 0$

$x = -6/5$

(20) $3x^2 - 41x + 60 = 0$

1	2	3	4	5	6
60	30	20	15	(12)	10

$\iff (x-12)(3x-5) = 0$

so either $x = 12$ or $x = \frac{5}{3}$