The Quadratic Formulae Mark Scheme		
1	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	[1] Students should know this from memory.
2(a)	$a = 1, b = 1, c = -10$	[1]
2(b)	$a = 5, b = 3, c = -22$	[1]
2(c)	$a = -1, b = 3, c = 1$	[1]
2(d)	$a = -1, b = -1, c = -1$	[1]
3(a)	$2x^2 + x\ - 10 = 0$	[1]
	$a = 2, b = 1, c = 10$	[1]
3(b)	$5x^2 + 3x\ - 22 = 0$	[1]
	$a = 5, b = 3, c = -22$	[1]
3(c)	$x^2 - 3x\ - 3 = 0$	[1]
	$a = 1, b = -3, c = -3$	[1] Accept $a = \frac{1}{3}, b = -1, c = -1$
3(d)	$3x^2\ - 7x + 22 = 0$	[1]
	$a = 3, b = -7, c = 22$	[1] Accept $a = 1, b = -\frac{7}{3}, c = \frac{22}{3}$
4(a)	$x = \frac{-1 \pm \sqrt{1^2 - (4 \times 1 \times -10)}}{2}$	[1] Correct substitution into formula
	$x = -3.70$ and $x = 2.70$	[1] Final answer
4(b)	$x = \frac{-3 \pm \sqrt{3^2 - (4 \times 5 \times -22)}}{10}$	[1] Correct substitution into formula
	$x = -2.42$ and $x = 1.82$	[1] Final answer
4(c)	$x = \frac{-3 \pm \sqrt{(-3)^2 - (4 \times 1 \times -1)}}{2}$	[1] Correct substitution into formula
	$x = -0.30$ and $x = 3.30$	[1] Final answer
4(d)	$x = \frac{-1 \pm \sqrt{1^2 - (4 \times 1 \times -5)}}{2}$	[1] Correct substitution into formula
	$x = -2.79$ and $x = 1.79$	[1] Final answer
5	$\frac{-10 \pm \sqrt{10^2 - 4(1)(20)}}{2(1)}$	[1] Correct substitution into formula
	$x = -5 \pm \sqrt{5}$	[1] Correct single solution
	$x = -5 \pm \sqrt{5}$	[1] Both $\pm$ solutions given

6	$x^2 - 6x - 18 = 0$	[1] Rearranging
	$\frac{6 \pm \sqrt{(-6)^2 - 4(1)(-18)}}{2(1)}$	[1] Correct substitution into formula
	$x = 8.20$ and $x = -2.20$	[1] Final answer
7	$\frac{42 \pm \sqrt{(-42)^2 - 4(3)(147)}}{2(3)}$	[1] Correct substitution into formula
	$x = 7$	[1] Final answer
8	$6x^2 + 2x - 24 = 0$ Simplifies to $3x^2 + x - 12 = 0$	[1] Rearranging
	$\frac{-1 \pm \sqrt{(1)^2 - 4(3)(-12)}}{6}$	[1] Correct substitution into formula
	$x = \frac{-1 \pm \sqrt{145}}{6}$	[1] Final answer

END