Answers and mark guide

Q	Answer	Working	Marks
1	**$x^2 - 14x + 48$**	Multiply out and collect like terms.	3
2	**$x^2 - x - 6$**	Multiply out and collect like terms.	3
3	**$x^2 + 5x + 4$**	Multiply out and collect like terms.	3
4	**$x^2 + x - 6$**	Multiply out and collect like terms.	3
5	**$x^2 + 10x + 16$**	Multiply out and collect like terms.	3
6	**$(x - 6)(x + 1)$**	Numbers that multiply to -6 and add to -5: −6 and 1	3
7	**$(x - 7)(x + 5)$**	Numbers that multiply to -35 and add to -2: −7 and 5	3
8	**$(x - 5)(x + 1)$**	Numbers that multiply to -5 and add to -4: −5 and 1	3
9	**$(x - 2)(x + 5)$**	Numbers that multiply to -10 and add to 3: −2 and 5	3
10	**$(x - 8)(x + 2)$**	Numbers that multiply to -16 and add to -6: −8 and 2	3
11	**$12x^2 + 2x - 4$**	Multiply each pair, collect terms.	4
12	**$(3x + 4)(x + 2)$**	Factorise by grouping or trial and improvement.	4
13	**$x^2 + 2x + 1$**	$(x + a)^2 = x^2 + 2ax + a^2$	3
14	**$(x + 8)(x - 8)$**	Difference of two squares.	3
15	**$x^2 + 1x - 25$**	Difference of two squares plus the extra term.	4
16	**$(2x + 1)(x + 2)$**	Numbers multiplying to 4 and adding to 5: 1 and 4	4
17	**$(3x + 2)(x - 3)$**	$3 \times (-6) = -18$; numbers −9 and 2 add to −7	5
18	**$(2x + 5)(2x - 5)$**	Difference of two squares	3
19	**$x = -1/2$ or $x = -2$**	$(2x + 1)(x + 2) = 0$	5
20	**$3x^2 - 8x + 13$**	$4x^2 - 12x + 9 - (x^2 - 3x - 4)$	5

My score: _____ / 70 Questions 1–15 = 48 marks (Foundation focus)