Answers and mark guide

Q	Answer	Working	Marks
1	**x = 6 or x = 9**	Factorise: (x − 6)(x − 9) = 0	3
2	**x = −9 or x = −5**	Factorise: (x + 9)(x + 5) = 0	3
3	**x = 5 or x = −7**	Factorise: (x − 5)(x + 7) = 0	3
4	**x = −9 or x = −7**	Factorise: (x + 9)(x + 7) = 0	3
5	**x = 6 or x = −6**	Factorise: (x − 6)(x + 6) = 0	3
6	**x = 11 or x = −11**	$x^2 = n^2$ gives two solutions.	3
7	**x = 0 or x = −10**	Factorise: x(x + n) = 0.	3
8	**x = 0 or x = −11**	Factorise: x(x + n) = 0.	3
9	**x = 3 or x = −1**	Rearrange to $x^2 - 2x - 3 = 0$ and factorise.	4
10	**x = −9 or x = −8**	Rearrange to $x^2 + 17x + 72 = 0$ and factorise.	4
11	**x = 1/3 or x = 2**	Factorise: (3x − 1)(x − 2) = 0	4
12	**x = −2/3 or x = −3**	Factorise: (3x + 2)(x + 3) = 0	4
13	**x = −1 or x = −5**	Factorise: (3x + 3)(x + 5) = 0	4
14	**x = 3/4 or x = 5**	Factorise: (4x − 3)(x − 5) = 0	4
15	**x = 2 or x = 3**	Factorise: (2x − 4)(x − 3) = 0	4
16	**x = 4**	$x^2 + 3x - 28 = 0$; factorise and reject the negative solution.	5
17	**6 and 7**	$n(n+1) = 42$; $n^2 + n - 42 = 0$	5
18	**4**	$n^2 + 2n - 24 = 0$	5
19	**x = 3**	$x^2 + (x + 1)^2 = 25$; $2x^2 + 2x - 24 = 0$	5
20	**x = 0 or x = 5**	$x^2 - 5x - 24 = -24$; so $x^2 - 5x = 0$	5

My score: _____ / 77 Questions 1–15 = 52 marks (Foundation focus)