Answers and mark guide

Q	Answer	Working	Marks
1	**57**	$((-7))^2 - 4\times(-1)\times(2)$	2
2	**64**	$(4)^2 - 4\times(4)\times((-3))$	2
3	**−64**	$(4)^2 - 4\times(5)\times(4)$	2
4	**−71**	$(3)^2 - 4\times(5)\times(4)$	2
5	**40**	$(4)^2 - 4\times(3)\times((-2))$	2
6	**x = −5.85 or x = 0.854**	x = (−b ± √(b² − 4ac)) ÷ 2a with a = 1, b = 5, c = −5; discriminant = 45	4
7	**x = −6.19 or x = −0.807**	x = (−b ± √(b² − 4ac)) ÷ 2a with a = 1, b = 7, c = 5; discriminant = 29	4
8	**x = −6.37 or x = −0.628**	x = (−b ± √(b² − 4ac)) ÷ 2a with a = 1, b = 7, c = 4; discriminant = 33	4
9	**x = −5.79 or x = −1.21**	x = (−b ± √(b² − 4ac)) ÷ 2a with a = 1, b = 7, c = 7; discriminant = 21	4
10	**x = −9.52 or x = 0.525**	x = (−b ± √(b² − 4ac)) ÷ 2a with a = 1, b = 9, c = −5; discriminant = 101	4
11	**x = −1.78 or x = 0.281**	a = 4, b = 6, c = −2; b² − 4ac = 68	4
12	**x = −4.12 or x = 0.121**	a = 2, b = 8, c = −1; b² − 4ac = 72	4
13	**x = 0.451 or x = 2.22**	a = 3, b = −8, c = 3; b² − 4ac = 28	4
14	**x = −4.14 or x = −0.363**	a = 2, b = 9, c = 3; b² − 4ac = 57	4
15	**x = −1.88 or x = 0.884**	a = 3, b = 3, c = −5; b² − 4ac = 69	4
16	**1**	b² − 4ac = 0: 4 − 4k = 0	5
17	**b² − 4ac = −60 < 0**	$(0)^2 - 4\times3\times5 = -60$, which is negative, so there are no real roots.	4
18	**x = −3 ± √14**	x = (−6 ± √(36 + 20))/2 = −3 ± √14	5
19	**x = −4.19 or x = 1.19**	x² + 3x − 5 = 0; discriminant = 29	5
20	**b = 4, c = −1**	Sum of roots = −4 = −b; product = 4 − 5 = c	5

My score: _____ / 74 Questions 1–15 = 50 marks (Foundation focus)