Answers and mark guide

Q	Answer	Working	Marks
1	**31**	Substitute	2
2	**14**	Substitute	2
3	**18**	Substitute	2
4	**0**	Substitute	2
5	**13**	Substitute	2
6	**(x − 2)/2**	Swap x and y and rearrange.	3
7	**$2x^2 + 9$**	fg(x) = f(g(x))	4
8	**$4x^2 + 28x + 55$**	gf(x) = g(f(x))	4
9	**2x − 3**	Rearrange y = (x + d)/2	3
10	**25x + 18**	f(f(x))	4
11	**x = 4**	Set equal and solve	3
12	**x = 3 or x = −3**	a x^2 + b = ...	5
13	**Shown**	$f^{-1}(ax + b) = (ax + b − b)/a = x$	4
14	**2x**	gf(x) = (ax + b) − b	4
15	**$x \neq 1$; $f^{-1}(x) = 1/x + 1$**	y = 1/(x − c)	5
16	**(x + 7)/(x − 2)**	Swap x and y, then make y the subject	5
17	**√x, x ≥ 0**	The inverse of squaring	4
18	**[]**	Expand both sides	5
19	**It is not one-to-one: for example f(2) = f(−2) = 4**	Each y has two x-values	4
20	**34**	Substitute	2

My score: _____ / 69 Questions 1–15 = 49 marks (Foundation focus)