Answers and mark guide

Q	Answer	Working	Marks
1	**(0, 2)**	Average the x-coordinates and the y-coordinates.	2
2	**(−4, −1)**	$((x_1 + x_2)/2, (y_1 + y_2)/2)$	2
3	**(0, 2)**	Average the x-coordinates and the y-coordinates.	2
4	**(0, 6)**	$((x_1 + x_2)/2, (y_1 + y_2)/2)$	2
5	**(−1, 8)**	Average the x-coordinates and the y-coordinates.	2
6	**(5, −1)**	Q = 2M − P	3
7	**(7, −1)**	B = 2M − A	3
8	**(−1, 4)**	Q = 2M − P	3
9	**(−2, 6)**	B = 2M − A	3
10	**(3, −6)**	Q = 2M − P	3
11	**10.2**	Pythagoras on the horizontal and vertical differences	4
12	**10 units**	B = (m + 3, m + 4); differences 6 and 8	4
13	**(4, 3)**	C = B + D − A = (8, 6); midpoint of AC = (4, 3)	4
14	**(7, −1)**	The centre is the midpoint of the diameter.	3
15	**1.41**	Half the length of AB	5
16	**AB (4, 0); BC (6, 3); AC (2, 3)**	Average each pair.	5
17	**A_y = 3, B_x = 3**	Use the midpoint formula for each coordinate.	5
18	**y = −2x + 10**	Midpoint (4, 2); AB has gradient 1/2 so the perpendicular has gradient −2; c = 2 + 8 = 10	6
19	**Shown**	x: 2m − a; y: 2m − a	4
20	**(−2, −7)**	Average the coordinates.	2

My score: _____ / **67** Questions 1–15 = 45 marks (Foundation focus)