Answers and mark guide

Q	Answer	Working	Marks
1	**(1, 7)**	Add the top numbers, then the bottom numbers.	2
2	**(2, 1)**	Subtract the corresponding components.	2
3	**(−2, 10)**	Multiply each component by 2.	2
4	**(6, 13)**	Double a first.	3
5	**(0, 0)**	Change both signs.	1
6	**(4, 3)**	AB = B − A	2
7	**0**	$\|a\| = \sqrt{(x^2 + y^2)}$	3
8	**(4, 2); 4.47**	Difference of coordinates, then Pythagoras	4
9	**a + c**	OB = OA + AB	3
10	**(7/2, 2)**	Average the coordinates.	3
11	**AB = c, OB = a + c, AC = c − a**	Opposite sides are equal and parallel.	4
12	**b − a**	AB = −a + b	3
13	**½(a + b)**	OM = a + ½(b − a)	4
14	**(2/3)a + (1/3)b**	OP = a + (1/3)(b − a)	5
15	**(5, 0)**	Subtract twice b.	3
16	**(3/5)a + (2/5)b**	OP = a + 2/5(b − a)	5
17	**a + ½c**	OM = OA + ½AB = a + ½c	5
18	**(6, 4); 7.21**	Component-wise then Pythagoras	5
19	**(6, 9) = 3 × (2, 3)**	One is a multiple of the other	3
20	**MN = ½(b − a) = ½AB**	MN = −½a + ½b	5

My score: _____ / 67 Questions 1–15 = 44 marks (Foundation focus)