Answers and mark guide

Q	Answer	Working	Marks
1	**MN = ½(b − a) = ½AB, so MN ∥ AB**	MN = −½a + ½b	4
2	**Midpoint of OB = ½(a + c); midpoint of AC = a + ½(c − a) = ½(a + c): same point**	Both give ½(a + c)	5
3	**PQ = 2/3(b − a) = 2/3AB**	OP and OQ are each 2/3 of OA and OB	5
4	**(3/5)a + (2/5)b**	OP = a + 2/5(b − a)	5
5	**OM = a + ½(b − a) = ½(a + b)**	AB = b − a	4
6	**MN = ½(b − a) = ½AB, so MN ∥ AB**	MN = −½a + ½b	4
7	**Midpoint of OB = ½(a + c); midpoint of AC = a + ½(c − a) = ½(a + c): same point**	Both give ½(a + c)	5
8	**PQ = 3/4(b − a) = 3/4AB**	OP and OQ are each 3/4 of OA and OB	5
9	**(3/5)a + (2/5)b**	OP = a + 2/5(b − a)	5
10	**OM = a + ½(b − a) = ½(a + b)**	AB = b − a	4
11	**MN = ½(b − a) = ½AB, so MN ∥ AB**	MN = −½a + ½b	5
12	**Midpoint of OB = ½(a + c); midpoint of AC = a + ½(c − a) = ½(a + c): same point**	Both give ½(a + c)	5
13	**PQ = 1/4(b − a) = 1/4AB**	OP and OQ are each 1/4 of OA and OB	5
14	**(2/3)a + (1/3)b**	OP = a + 1/3(b − a)	5
15	**OM = a + ½(b − a) = ½(a + b)**	AB = b − a	4

Q	Answer	Working	Marks
16	**MN = ½(b − a) = ½AB, so MN ∥ AB**	MN = −½a + ½b	5
17	**Midpoint of OB = ½(a + c); midpoint of AC = a + ½(c − a) = ½(a + c): same point**	Both give ½(a + c)	5
18	**PQ = 1/3(b − a) = 1/3AB**	OP and OQ are each 1/3 of OA and OB	5
19	**(3/4)a + (1/4)b**	OP = a + 1/4(b − a)	5
20	**OM = a + ½(b − a) = ½(a + b)**	AB = b − a	4

My score: _____ / 94 Questions 1–15 = 70 marks (Foundation focus)