Answers and mark guide

Q	Answer	Working	Marks
1	**Yes: SSS (three pairs of equal sides)**	Match the pairs of equal sides and angles to a congruence condition.	3
2	**Yes: SAS (two sides and the included angle)**	Match the pairs of equal sides and angles to a congruence condition.	3
3	**Yes: ASA (two angles and the corresponding side)**	Match the pairs of equal sides and angles to a congruence condition.	3
4	**Yes: RHS (right angle, hypotenuse and a side)**	Match the pairs of equal sides and angles to a congruence condition.	3
5	**Yes: SSS (three pairs of equal sides)**	Match the pairs of equal sides and angles to a congruence condition.	3
6	**No: equal angles only show the triangles are similar (AAA is not a congruence condition)**	The sides could be different lengths.	3
7	**No: SSA is not enough (the angle is not between the two sides)**	Two different triangles are possible.	4
8	**Yes: RHS (right angle, hypotenuse and a side)**	Check each condition.	3
9	**SSS, SAS, ASA (or AAS) and RHS**	Standard conditions.	3
10	**AAA and SSA (unless it is a right-angled triangle)**	Not enough information.	3

Q	Answer	Working	Marks
11	**AB = CD (opposite sides), BC = DA (opposite sides), AC is common: SSS**	Use the properties of a parallelogram.	5
12	**AB = DC, AD = BC (opposite sides) and BD is common: SSS**	Rectangle sides	5
13	**PQ = PR (given), QM = RM (midpoint), PM is common: SSS**	Isosceles triangle	5
14	**AP = AQ (radii), BP = BQ (radii), AB is common: SSS**	Radii of the same circle are equal.	5
15	**AB = AC, BD = DC, AD is common: SSS (or RHS)**	Equilateral triangle	5
16	**AB = AD, CB = CD, AC is common: SSS; corresponding angles in congruent triangles are equal**	Kite properties	6
17	**All sides equal; PR is common: SSS**	Square	5
18	**Angle BAD = angle CAD, angle ADB = angle ADC = 90°, AD is common: ASA, so AB = AC**	ASA proof	6
19	**AX = XB, CX = XD (midpoints) and angle AXC = angle BXD (vertically opposite): SAS**	Vertically opposite angles	5

Q	Answer	Working	Marks
20	**They are identical shapes (same size), so their areas are equal**	Congruent means identical in size and shape.	3

My score: _____ / **81** Questions 1–15 = 56 marks (Foundation focus)