

QUESTION 1

Q#	SUGGESTED ANSWER	DESCRIPTORS
1.1	105° ✓	1 mark each for the correct answer $(1 \times 7 = 7)$ [7]
1.2	120° ✓	
1.3	Isosceles Δ ✓	
1.4	Complement ✓	
1.5	Rotation ✓	
1.6	Parallel ✓	
1.7	Equal ✓	

QUESTION 2

2.1.1	$90^\circ + 50^\circ + x = 180^\circ$ ✓ (straight angle or adjacent supplement <'s) ✓ $x = 40^\circ$ ✓	1 mark for statement 1 mark for reason 1 mark answer (3)
2.1.2	$2x + 10^\circ = 3x - 50^\circ$ ✓ (vertically opposite <'s) ✓ $2x - 3x = -50^\circ - 10^\circ$ $2x - 3x = -50^\circ - 10^\circ$ $-2x = -60^\circ$ $x = 30^\circ$ ✓	1 mark for statement 1 mark for reason 1 mark answer (3)
2.2.1	$a = 105^\circ$ ✓ (corresponding <'s) ✓	1 mark for answer 1 mark for reason (2)
2.2.2	$b + 50^\circ = 180^\circ$ ✓ (co-interior <'s of a Δ) ✓ $b = 130^\circ$ ✓	1 mark for statement 1 mark for reason (3)
2.2.3	$63^\circ + c = 90^\circ$ ✓ (adjacent complementary <'s) ✓ $c = 27^\circ$ ✓	1 mark answer 1 mark for statement 1 mark for reason 1 mark answer (3) [14]

QUESTION 3

3.1.	$x = 80^\circ$ ✓ alternate <'s; $AC \parallel BD$ ✓ $60^\circ = y + 10^\circ$ ✓ corresponding <'s; ✓ $AC \parallel BD$ ✓ $y = 50^\circ$ ✓	1 mark for value of x and 1 mark for reason 1 mark for equation 1 mark for reason 1 mark for value of y (5)
3.2	$a + 2a = 180^\circ$ ✓ straight < ✓ $a = 60^\circ$ ✓	1 mark for statement 1 mark for reason

	ΔPQR is an Isosceles Δ ✓ since sides are equal. $2a + c = 180^\circ$ ✓ $c = 60^\circ$ ✓ OR ΔPQR is an Equiangular Δ ✓ since $a = 60^\circ$ and two sides equal, another $a = 60^\circ$ then all $\angle$'s ✓ equal. $c = 60^\circ$ ✓	1 mark for value of a and 1 marks for valid reason i.e. 1 mark recognition of the triangle – Equilateral Δ or Isosceles Δ 1 mark for finding the connection (all $\angle$'s = for Equilateral Δ or two $\angle$'s = for the Isosceles Δ) 1 mark for finding value of c (6)
3.3	1. equilateral Δ ✓ 2. equilateral Δ ✓ 3. isosceles Δ ✓ 4. right angled Δ ✓ 5. quadrilateral ✓ 6. kite ✓	1 mark for correct answer (1×6 = 6) [17]

Question 4

4.1.	$x + 10^\circ + x + 10^\circ + 50^\circ = 180^\circ$ sum three $\angle$'s in Isosceles Δ ✓ $2x + 70 = 180^\circ$ $x = 55^\circ$ ✓	1 mark for statement 1 mark for reason 1 mark answer (3)
4.2.1	$x + 55^\circ = 90^\circ$ ✓ adjacent complementary $\angle$'s ✓ $x = 35^\circ$ ✓	1 mark for statement 1 mark for reason 1 mark for answer (3)
4.2.2	$z = 35^\circ$ ✓ alternate $\angle$'s; $MQ \parallel NP$ ✓	1 mark for answer 1 mark for reason (2)
4.2.3	$y + x = x = 180^\circ$ sum 3 $\angle$'s in Isosceles $\Delta = 180^\circ$ ✓ $y + 70^\circ = 180^\circ$ ✓ $y = 110^\circ$ ✓	1 mark for statement 1 mark for reason 1 mark for substitution /simplification 1 mark answer (4) [12]

Question 5

5.1.2	ΔABC and ΔDEF The triangles are congruent because the hypotenuse of the right-angled triangles, are equal and a second side is equal. ✓✓	2 marks for logical explanation (2)
5.1.2	ΔABC and ΔGHJ These triangles are similar. Two corresponding angles are equal. The third angle will also be equal because the sum of the angles is 180° . ✓✓✓	1 marks for logical explanation (2)
5.2.1	Parallelogram: ✓	1 mark for correct 2 D shape

5.2.2	2 pairs opposite sides parallel. 2 pairs of opposite sides are parallel. 2 pairs of opposite angles are equal All interior angles add to 360 ✓ Trapezium ✓ 1 pair opposite sides parallel.	1 mark for any correct characteristic 1 mark for correct 2 D shape 1 mark for any correct characteristic
5.2.3	All interior angles add to 360 ✓ Square ✓ 2 pairs opposite sides parallel. All angles equal. 2 pairs of opposite sides are parallel. All interior angles add to 360 ✓ 1 ✓	1 mark for correct 2 D shape 1 mark for any correct characteristic