Grade 8
JUNE P1 2015 MARKING MEMORANDUM

QUESTION 1

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

QUESTION 2

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

QUESTION 3

3.1.	$x = 80°$ ✓ alternate $< 's$; AC ∥ BD ✓	1 mark for value of x and 1 mark for reason
	$60° = y + 10°$✓ corresponding $< 's$; ✓ AC ∥ BD ✓ $y = 50°$✓	1 mark for equation 1 mark for reason 1 mark for value of y (5)
3.2	$a + 2a = 180°$✓ straight $<$ ✓ $a = 60°$ ✓	1 mark for statement 1 mark for reason 1 mark for value of a and
	ΔPQR is an Isosceles Δ ✓since sides are equal.	**1 marks for valid reason i.e.**

	$2a + c = 180°$✓ $c = 60°$ ✓ OR ΔPQR is an Equiangular Δ✓since $a = 60°$ and two sides equal, another $a = 60°$ then all$< 's$ ✓ equal. $c = 60$✓	1mark recognition of the triangle – EquilateralΔ or Isosceles Δ 1 mark for finding the connection (all $< 's =$ for Equilateral Δ or two $<' s =$ 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 $(1 \times 6 = 6)$ **[17]**

Question 4

4.1.	$x + 10° + x + 10° + 50° = 180°$ sum three $< 's$ in Isosceles Δ✓ $2x + 70 = 180°$ $x = 55°$✓	1 mark for statement 1 mark for reason 1 mark answer (3)
4.2.1	$x + 55° = 90°$✓ adjacent complementary $< 's$✓ $x = 35°$✓	1 mark for statement 1 mark for reason 1 mark for answer (3)
4.2.2	$z = 35°$ ✓alternate $< 's$; MQ ‖ NP ✓	1 mark for answer 1 mark for reason (2)
4.2.3	$y + x = x = 180°$✓ sum 3 $<' s$ in Isosceles Δ = 180°✓ $y + 70° = 180°$✓ $y = 110°$✓	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: ✓ 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° ✓	1 mark for correct 2 D shape 1 mark for any correct characteristic

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