Topic Test 1 Mark Scheme

Circle theorems - Higher

Q	Answer	Mark	Comments
1	45°	B1	
2	65°	B1	
3	*DAB* = 60 + their answer from Q1 or 105	B1	
	75	B1ft	ft their answer from Q1
4	*ABC* = 62	B1	
	Opposite angles in a cyclic quadrilateral add up to 180	B1	oe
	AOC = 124	B1	
	Angle at centre = twice angle at circumference	B1	oe
5	$BOC = 180 - 2x$ or $BOA = 180 - 2y$	B1	
	Isosceles triangle and angle sum of a triangle = 180	B1	
	$AOC = 360 - (180 - 2x + 180 - 2y)$	M1	
	$360 - 360 + 2(x + y) = 2(x + y)$		
6	*ACD* = 57	B1	
	Angles in same segment (are equal)	B1	
	DEC = 57 seen or implied	B1	180 – (57 + 57)
	66	B1	

Q	Answer	Mark	Comments
7	*OBD* = 90 or *OCD* = 90	B1	
	BOC = 120	B1	
	AOC = 60	B1	
	OA = *OC* so *OAC* and *OCA* = (180 – 60) ÷ 2, all angles are equal (60) so equilateral	B1	