	Circles & Sectors Mark Scheme	
1	$A = \frac{\pi \times 3.6^2}{4}$	[1] Correct equation
	$A = \frac{81\pi}{25} = \frac{40.715}{4}$	[1] Correct calcualtion
	$A = 10.18\, m^2$	[1] Correct to 2 decimal places
2	Area of circle $= \pi \times r^2 = \pi \times 5^2 = 25\pi$	[1] Area of entire circle
	Area of sector $= \frac{50}{360} \times 25\pi$	[1] Area of $50°$ sector calculation
	$= 10.9\, m^2$	[1] Correct area to 1 decimal place
3	Area of sector $= \frac{60}{360} \times \pi \times x^2 = 18.4\, m^2$	[1] Area of $60°$ sector calculation
	$x^2 = 35.141$	[1] Rearranging
	$x = 5.9$	[1] Correct radius to 1 decimal place
4(a)	Area $= \frac{30}{360} \times \pi \times 5^2$	[1] Correct calculation
	$= 6.5\, m^2$	[1] Correct area to 1 decimal place
4(b)	Arc length of circle $= 10\pi$	[1] Correct calculation of circumference
	Arc length of sector $= \frac{30}{360} \times 10\pi = 2.6\, m$	[1] Correct calculation of arc length
5	Area of sector $= \frac{x}{360} \times \pi \times 9^2 = 26.15\, m^2$	[1] Correct calculation
	Angle $x = 37.0°$	[1] Correct angle
6	Perimeter = $9 + 9 + 9 - 3 - 3 + l$	[1] Forming equation with arc length l
	Arc length $l = \frac{60}{360} \times \pi \times 6 = \pi\, m$	[1] Correct calculation
	Total perimeter = $21 + \pi = 24.1\, m$	[1] Correct perimeter to 1 decimal place
7	Area of OAB sector $= \frac{90}{360} \times \pi \times 8^2 = 16\pi$	[1] Correct calculation
	Area of other circle $= \frac{270}{360} \times \pi \times 4^2 = 12\pi$	[1] Correct calculation
	Total area = $12\pi + 16\pi = 88.0\, cm$	[1] Correct perimeter to 1 decimal place

END